Streamlining Government Financing Programs for SME’s in the Sub-Saharan Africa: The Case of Botswana

By
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Abstract

The issue of SMEs financing is complex and we should address on priority basis. Although SMEs should be motivated to initiate their own means of solving their financing problems, their capacity is limited and the role of other stakeholders in the financial sector is vital. In this scenario, governments have a major role to play. Strengthening the government’s role is very important since it acts as a catalyst, investor and regulator to strengthen the supply-side of the economy. This paper discusses what role the Government of Botswana (GoB) can effectively play in facilitating SMEs financing. I proposed four financing packages containing schemes for possible use by the GoB. They are: direct financial assistance schemes; loan guarantee schemes; direct credit grant schemes; and financing of technical and managerial advisory services. Stakeholders need to evaluate these schemes from the economic rationality point of view before they are opted for implementation.

Introduction

Small, Medium and Micro Enterprises (SMEs) are widely regarded as the engine of economic growth in both developing and developed nations (Tesfayohannes, 1998). They are substantial generators of local and broad-based employment; promoters of indigenous entrepreneurship and innovation; and providers of goods and services to the local population and beyond. Nations in the Sub-Saharan Africa (SSA) already recognized the vital role of SMEs, and keen to give priority for their development (Briscoe, 1995). However, SMEs require a nurturing environment and supporting infrastructure for sustainable development. There are vital external

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and internal factors affecting SMEs’ development in any national socio-economic framework. The external ones are national institutional capacity, regulatory framework, training and entrepreneurial development, access to finance, market opportunities, technological support and suitable socio-cultural and political environment (Liedholm, 1993; Rodinelli, and Dasarda, 1992; Tesfayohannes, 1998). Although, all the above factors require consideration, lack of finance has continued to be the major concern and the main cause for untimely failure of many SMEs (Liedholm, 1993; Morewagae, et al, 1995). This is particularly a common phenomenon for SMEs in the developing countries (National Small Business Regulatory Review, 1999). SMEs’ financing is complex and all stakeholders need to address the issue skillfully and prudently. There are numerous potential sources of financing for SMEs. We can broadly categorize them as: Equity Financing, Debt Financing, Special Purpose and Governmental sponsored financing (Tesfayohannes, 1998). These categories have their own distinctive method of dealings with the qualified SMEs. But, an effective partnership between financial institutions, cooperative funds, the government, private and cooperative investors, venture capital firms, investment angels, non-bank financial institutions can ideally facilitate SMEs’ access to finance.

Botswana is a middle-income country located in Southern Africa. It is a peaceful, democratic nation with a striving national economy. The country has an effective private sector led sustainable economic development agenda that promotes gender aware economic diversification, poverty reduction and SMEs’ development (National Development Plan 8, 1998; Vision 2016, 1996). In line with its core development agenda, the Government of Botswana (GoB) issued a special policy on SMEs development (National Policy on SMEs, 1999). During the last 10 years, the GoB through its responsible institutional capacities attempted to implement
those laid out policy directives, modalities and strategic objectives with the support of other community based stakeholders. So far, results are not as desired and local SMEs have continued to suffer from lack of access to finance (Task Force Report, 1998).

In this paper, I focused on how governments can play a catalyst role as investor and regulator of the financial environment with the desired effectiveness. Moreover, I intended to discuss on the Whys and Hows of the direct and indirect roles of the GoB towards alleviating SMEs financing problems. Although, I don’t believe that governments cannot solve SMEs’ financing problems totally, but, they can substantially facilitate SMEs’ access to finance. This is particularly true in the case of many nations in the SSA. Governments in SSA are currently overstretched due to their dominant involvement in many vital responsibilities and regulatory attributes. My aim here is just to recommend feasible government sponsored SMEs’ financing schemes that GoB can initiate, handle and implement through its appropriate institutions and agencies. This can be a small contribution towards the efforts to achieve the desired goal and strengthen the effectiveness of SMEs financing scenario in Botswana. The GoB keenly interested to involve actively in promoting SMEs as the engines of economic growth and social prosperity. SMEs access to finance is an important issue, and the GoB’s role is cardinal. I believe that the financing schemes I conceptually proposed in this paper can also be useful for other SSA nations facing similar problems.

**SMEs as the Engine of Growth**

Unfortunately, some policy makers still regard SMEs as the consequences of the failure to apply the conventional economic development paradigms exclusively stated in the Neoclassical School of Economic Thought. This comprehensive grasp on SMEs has given the
impetus for the attitude of viewing them as lonely entities with immutable diseconomies. However, all major entrepreneurial innovations and killer applications (groundbreaking innovations) that have been responsible for drastic change in our economic and social life were largely the result of SMEs’ innovative activities and related entrepreneurial attributes (Kuratko and Hodgetts, 2007). However, currently SMEs are high in the developmental agendas of all nations as important contributors to national economies (Hull, 1983; McPherson, 1996). More than any time, African nations have now embraced the paramount importance of SMEs as a vital motive force of innovation, change, and development (Owualah, 1988; Liedholm and Fuzzy, 1994; McGrath and King, 1999, Van Dijk and Sandee, 2002). Beyond the narrower spectrum, African nations should comprehend that the key to economic growth in any country lies in creating the necessary infrastructures that support the promotion of SMEs (Roux, 1999). This mandatory prerequisite can potentially help to overcome constraints hindering the enhanced developmental scope of SMEs (McCormick, 1999).

As briefly mentioned earlier, the current position of SMEs in Botswana is not rosy. At least at this time, they are not contributing to the national economy in line with their expectations. In fact, they are currently plagued with technical, regulatory, organizational, financial and other institutionally related problems at both macro and micro levels (Hinton, Mokobi and Sprokel, 2006). Even with all their formidable challenges, they are still significant to Botswana’s economy (Briscoe, 1985; Daniels and Fisseha, 1992, Cuncombe and Heeks, 2001). They continued to actively participate in all vital sectors of the national economy (Sunny, 2000). Unfortunately, Botswana has only rudimentary statistical data and it is difficult to have a full knowledge on the structure of SMEs’ and their contribution to GDP and broad employment. However, according to the Presidential Taskforce Report (1998) and Botswana aggregate
Statistical Report, 2007/2008), SMEs’ annually contribute approximately 25 – 35 percent of the country’s GDP. Their contribution to employment is more appreciable and accounts for 50 percent of the total formal employment. This is indeed an indication that Botswana is working effectively for the full-fledged development of SMEs’ as vital economic motive forces that serve as a means of providing equitable benefits for the majority (Curry, 1987). In line with the strategic agenda, SMEs occupied a center stage in government’s endeavor to achieving sustainable industrial development (Sunny, 2000). As articulated in the SME national policy, the current GoB efforts focused on: employment creation, poverty alleviation, economic diversity promotion, indigenous entrepreneurship advancement and foster successful economic competition. This is in line with the country’s long-term vision towards advancement and prosperity for All” (Vision 2016, 1996). GoB should also continue to create an enabling environment for collaboration and partnership with other stakeholders for the speedy realization of the desired strategic objectives.

**Some Fundamental Aspects of SMEs’ Financing**

**The Financing Constraints**

Some have argued that SMEs do not need special financing schemes and they should compute in the financial market (Mazumdar, 1989). However, many studies have advocated for SMEs’ focused financing as they suffer most due to lack of suitable access to finance. This lack of finance is the toughest constraint in most of the developing nations (Cook., 2001; Lycette and White, 1989; Harrison and McMillan, 2003; Kurwijila and Due, 1991). For example, Levy (1993) emphasized in his study that the lack of finance is the primary bottleneck to smaller business
operation expansion in the leather and furniture industries in Sri Lanka and Tanzania. In a similar way, studies conducted in other African nations like Ghana, Kenya, Nigeria, Ethiopia, South Africa have shown that the major cause of small enterprises’ failure is their inability to obtain adequate financing (Schoombe, 2000; Bigsten et al, 2000; Aryeetey, 1993; Oyejide, 1993; Marana, 1993; Demesne, 1993). In their study, Morewagae et al (1995) found that the ability of SMEs to obtain funds is constrained by the lack of information, complicated application procedures, high collateral or security requirements, high interest rates, and harsh repayment terms. In a lesser degree, this case is also felt in the developed countries (Brigham, 1983; Harrison, and Mason, 1993). Walker and Petty (1986) noted that SMEs are subject to greater risks, business and financial and are more vulnerable to bad decisions than their larger counterparts are. SME financing problems stem from the lack of capacity to obtain funds at the right time, of the right type, in the desired amount and at various stages of development (Bates and Hally, 1982). Many potentially innovative and productive entrepreneurs in the SSA have failed because of lack of finance (Tesfayohannes, 1998).

Numerous studies identified several case specific and general problems related to SMEs’ financing problems (Task Force Report, 1998; Liedholm, 1993; Rempel, et al, 1994; Morewagea, et al, 1995; Lisenda, 1997). The common problems that affect SMEs in SSA nations are: conservative approach of the financial industry; less effective governmental regulatory frameworks; internal organizational and financial weakness of the SMEs; less recognition of the role of SMEs as the engine of economic growth; in-adequate entrepreneurial and managerial acumen of SMEs’ owners and managers; the marginal role and availability of informal financing sources in the society; and the non-supportive role of institutions and agencies representing the
interests of SMEs (Example: Chambers of Industry and Commerce, Entrepreneurs Association, Financial Cooperatives and other concerned agencies representing the SMEs sector).

**SMEs Financing in Botswana**

In Botswana, Entrepreneurs particularly the local ones have continued to complain about the limited access to finance. Their complaints emanated from the conservative attitude of banks and other commercial lenders towards SMEs loan requests (Example, lack of the required information, complicated application procedures, high collateral or security requirements, high interest rates, and imposing harsh loan repayment terms). The GoB established and assigned a high-powered Task Force in 1997 to conduct an in-depth study on the general situation of SMEs in the country. The objective was to respond to the continued complaints and dissatisfaction of SMEs owners about access to finance and other problems related to SMEs in the country. The assigned task force produced a comprehensive Presidential Task Force Report (Task Force Report, 1998). The report contained new and extended promotional approaches and recommendations targeting: the Institutional and Regulatory Framework; Education, Training and Entrepreneurship Development; Access to Finance; and Support for Marketing and Technological Development.

According to the report, the current sources of finance for SMEs in Botswana are: personal and other related sources; government financial assistance mainly through Financial Assistance Policy (FAP); loans from commercial banks; loans from National Development Bank; and loans from other financial institutions. The task force report revealed that personal savings and contributions from family or friends and other unknown informal and semi-formal sources (informal lenders) account for more than 70% of SMEs financing. This shows that the majority
of SMEs in Botswana have relatively few opportunities to obtain finance from sources other than the above mentioned non-commercial sources. These limitations continued to have negative impact on SMEs. This phenomenon in turn significantly discouraged other potential entrepreneurs from involvement in establishing entrepreneurial ventures.

The report further indicated that commercial banks are formally ready to provide loans up to Pula 100,000[^1] to SMEs. However, on the one hand, entrepreneurs frequently criticize commercial banks for their hesitation and excessive conservatism in dealing with lending to SMEs by imposing excessive bureaucracy. On the other hand, Commercial banks also complained on the unreliability of SMEs due to lack of collateral, insufficient equity contribution of owners, inadequate financial record and poorly prepared business plans. It can be concluded that the current commercial banks role to alleviate SMEs financing problems has proven to be limited and discouraging. It is in fact accounting for only 2 percent of the required finance at both start-up and post-start-up stages (Lisenda, 1997). This is unacceptable at any yardstick.

The GoB also facilitated an alternative sources of finance for SMEs mainly from the government owned development banks and special funding agencies in the country. The existing institutions of this kind are: The National Development Bank (NDB), Tswelelo and the Botswana Development Corporation (BDC). Surprisingly, NDB lending policies and regulations are more or less similar to the commercial banks. Its minimum loan is Pula 20,000. This amount is by far less than the minimum loan provided by the commercial banks. Tswelelo is no more functional due to sustained losses emanated from its very poor lending and loan collection processes. The minimum BDC’s loan provision is Pula 200,000. This automatically targets those, size wise, bigger enterprises with higher needs for finance. There are some other nominal financing agencies like Women’s Finance House Botswana (WFHB), Cooperation for Research,
Development and Education (CORDE) and Rural Industries Innovation Center. These Non-governmental Organizations (NGOs) mostly limited to a narrower domain. Their full dedication is just to provide small supplementary loans and financial assistance to cover some of the ad hoc financing needs of SMEs.

The Financial Assistance Program (FAP) was launched by the GoB to provide financial assistance and loan grants to qualified SMEs owned by local entrepreneurs. The objective was to foster grass roots level self-employment and provide more opportunity for the qualified Botswana citizen entrepreneurs to grow further and register success. The GoB introduced FAP in 1982 and amended it in 1995. Compared to other programs, FAP was well organized and intended for a wider coverage. FAP’s maximum financial assistance in term of loan was Pula 75,000 with a strict criteria. For example, to qualify for FAP financing the applicant must be a Botswana citizen, aged 18 years or older and should fulfill many other qualifying criteria. The maximum FAB financing is just to covers up to 90% of the required investment of the qualified projects. FAP funds gave priority to projects located in rural areas and those venture projects owned by women. The intention was good, but FAP was not successful to surmount its strategic objectives. According to the task force report, only 4% of SMEs got assistance from FAP. This good intentioned scheme suffered from extensive mismanagement, nepotism, corruption and inefficiency. In fact, it played a nominal role in creating sustainable, innovative and viable business ventures in the country. The GoB terminated the program and created the Citizens’ Entrepreneurial Assistance Policy (CEDA) in 2001 (Analytics, 2003). This new agency should continue to dedicate itself to surmount the challenge of initiating government sponsored SME financing schemes based on fulfilling strict and viable requirements. CEDA has also continued to
suffer from multiple problems too, and its ability to provide adequate services to its clients has continued to suffer as well.

The above briefly expressed impediments have played their own role in aggravating the situation. To alleviate these and other problems, the task force gave some comprehensive SMEs financing recommendations. They include the following: lending and credit-guarantees; setting-up mechanisms for improving the capacity of SMEs to access finance; and improving the effectiveness of the financial assistance and lending programs still currently active. Unfortunately, the tasks force recommendations are very general and lack specific application modalities and technical and action plan preparations. Successful application in turn demands the design of specific, viable and target-oriented financing schemes. Unlike other governments in SSA, the GoB has a mighty financial capacity due to substantial revenue from Diamond and other precious mineral exports (Morewagae et al, 1995; Analytics, 2003). This means the GoB has the ability to help SMEs at least to ease their financing problems in a viable way. However, this does not mean that government should solve every SMEs financing problems. In both developed and developing nations, what governments can do is limited. Governments have many other socio-economic related commitments (Chunyun, 2003). However, governments support can play a crucial role in the survival and growth of SMEs. This should include helping them to alleviate their financing problems by lunching certain target-oriented and wider outreached financing schemes (Chase, A. et al, 1983; Deutsche Ausgleich Bank-DtA, 1996). In line with this assertion, I formulated some financing schemes that might help GoB policy makers and stakeholders in charge of promoting SMEs in the country. The proposed schemes are not ready-made and are just for brain storming. Stakeholders need to appraise and substantiate them from their opportunity cost point of view.
Recommended Government Sponsored SMEs’ Financing Schemes

As briefly discussed above, GoB indeed participated in promoting SMEs’ financing initiatives through various schemes and programs. All these initiatives are relevant and supportive, but they should be implemented in the best possible way to improve SMEs financing outreach. This means GoB should search for better and more innovative ways of implementing established initiatives as part of its continuous improvement endeavors. Effective implementation requires the capability to streamline, cluster, and properly manage SMEs financing initiatives. The first action is clustering the existing fragmented government sponsored SMEs financing schemes and action programs into SMEs financing packages. Well packaged, organized and clustered schemes and action programs can be easier to implement and offer better management of financing outreach activities. I therefore proposed seven packages each of which can contain several government sponsored SMEs’ financing schemes (see Figure 1). From the seven packages comprehensively proposed, I selected the following four packages: Direct Financial Assistance Schemes; Loan Guarantee Schemes; Direct Credit Grant Schemes; and Financing of Technical and Managerial Advisory Services. I would like to underline that it is easy to design and propose schemes and action programs, but the most intricate task is to successfully implement and broaden the outreach to the targeted beneficiaries. This challenge rests mainly on the shoulders of the executing agencies. A systematic approach for the design and implementation of government sponsored SMEs’ financing schemes is shown in Figure 2. Each one of the SMEs’ financing packages proposed in Figure 1 should act as an umbrella for the proposed SMEs financing schemes and action programs related to each of them.
Figure 1: 
Recommended Government Sponsored SMEs’ Financing Schemes in Botswana

- Direct Financial Assistance Schemes
- Loan Guarantee Schemes
- Direct Credit Grant Schemes
- Bank Loan Subsidization Schemes
- Direct Equity Participation Schemes
- Export Financing Schemes
- Financing of Technical And Managerial Advisory Services and Performance Upgrading Extension Schemes
Figure 2
Methodological Steps of Government Sponsored SMEs’ Financing Schemes

Study the general situation of the existing SMEs in terms of:
- their types of activities,
- their locational aspects,
- their importance in the export promotion and import substitution national development strategies,
- their contribution towards achieving environmental sustainability,
- their present and potential contribution to job creation,
- their contribution towards: the promotion of regional balances in economic development and through narrowing rural-urban developmental gap and the income inequality,
- their contribution towards enhancing indigenous technological, managerial and entrepreneurial capacity,
- their contribution to overall industrialisation,
- their contribution as a means of overall manpower development.

Identify problem areas which need government assistance

Design the desired SMEs financing scheme(s) and structure of the organizational set-up required for the implementation of the designed scheme.

Raise the required funding for the designed SMEs’ financing scheme(s) (the required funding can be generated from government treasury, foreign sources, contributions from private and public business organisations and financial institutions and contributions from the community at large).

Express the clear purpose of the financing scheme(s) including other related extension advisory services

Set-up the comprehensive eligibility criteria (For example, for SMEs to qualify, it may be necessary for them to be engaged in certain activities which are vital for economic development)

Test the validity of the scheme(s) (using some qualified SMEs as a sample) Pilot testing

Is the test result valid? (i.e., is the designed scheme(s) helpful and instrumental?)

Repeat the process for designing a better and realisable scheme(s).

End of the process

Periodic evaluation and follow-up for further improvement and up dating

Implement the scheme(s) in practice

Yes

No
Direct Financial Assistance Schemes

As, I mentioned earlier, national governments in the developing economies control and own a large portion of national wealth and endowments including vital financial institutions like commercial banks. This can help them to possess the ability and strength to launch a variety of government sponsored initiatives and action programs including providing direct financial support for qualified SMEs. In the same way, the GoB can launch time bounded direct financial assistance schemes to provide non-obligatory funds to qualified SMEs as a contribution to their sustainable development.

In line with its commitment, the GoB has already established specialized agencies like Citizens’ Entrepreneurial Development Agency (CEDA) and Small Business Promotion Agency (SBPA) to provide its support through these types of agencies if they continue to function effectively by launching direct financial assistance related schemes and action programs. Figure 3 shows my recommendation in this package. The proposed schemes are general in their contents and intended just for brainstorming purpose and adaptation. GoB can also design and launch numerous other schemes under the same umbrella (package). I need to emphasize that these and other related schemes should undergo through direct or indirect critical evaluation in the light of their contribution to meeting the anticipated goals in the given environment.
### Proposed Government Direct Financing Schemes for SMEs in Botswana

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Objective</th>
<th>Targeted Beneficiaries (Eligibility)</th>
<th>Possible Sources Of Funding</th>
</tr>
</thead>
</table>
| **Industrial Feasibility Study Cost Coverage Financial Grant** | To finance feasibility studies for new ventures or for expansion projects of established firms | • SMEs at their seed (foundational) stage.  
• SMEs with a concrete expansion project especially in a government declared target zones or sites | • Government treasury  
• Foreign donations  
• Contributions from the business community through their representative agencies (organizations) |
| **Special Industrial Promotional Zone Development Grants** | One-time financial assistance (grant) to help new enterprises established in localities with low-level human and physical infrastructure (i.e., in socially and economically disadvantaged areas) | • For newly established SMEs in areas relatively underdeveloped but designated as target locations for development. | • Government treasury  
• Community groups of the Targeted areas  
• Contributions from the business community in the targeted location |
| **Research and Innovation Development Grant (Fund)** | To finance partially or fully the technological and innovation works and discoveries conducted by SMEs. | • SMEs that can convincingly demonstrate their innovative results (new products) will have practical and purposeful use for the society and a significant market potential in both local and foreign markets. | • Government treasury  
• Other concerned private and foreign agencies (GOs, NGOs and international organizations) can make supplementary financial contributions. |
| **Energy Problems Alleviation Fund** | To encourage SMEs to alleviate their energy supply problems and through that promote industrial efficiency | • SMEs located in areas with insufficient energy supply\(^2\).  
SMEs engaged in manufacturing of exportable goods may get priority. | Government treasury |

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#### Bank Loan Cost Subsidization and Loan Guarantee Programs

Banks and other formal lenders assume that the cost of processing loan applications submitted by SMEs is excessive. This may be one of the main reasons for their reluctance to grant loans to SMEs. Unfortunately, the majority of commercial banks uniformly consider SMEs

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\(^2\)In line with the rationalised development strategy of the country, the objective of this proposed incentive scheme is to motivate entrepreneurs to establish SMEs in „Economically and Socially Depressed Areas“.

\(^3\)In remote parts of Botswana where there are shortages of energy supply (particularly electricity), SMEs located there can have their own electricity generators. In this respect, government can make fixed time partial financial contributions to cover the cost of generators, and to subsidise cost of petrol like diesel needed to run generators possessed by the SMEs.
as borrowers with unstable credit worthiness and most vulnerable to the risk of default. Therefore, banks usually expect to bear a burden and incur extra costs in dealing with lending to SMEs. Especially if there are central bank imposed interest rate ceilings that do not reflect the actual market, commercial banks assume that they may not afford to lend to SMEs. In this situation, government risk sharing programs can motivate banks to lend and provide professional help to SMEs. Concerned GoB agencies can initiate appropriate risk sharing action schemes pertaining to loan cost subsidization and loan guarantee. They should ensure that the designed programs effectively assist qualified banks and other lenders to enable them to serve the needy SMEs as desired. Government subsidies and loan guarantees can help a great deal in building the commercial financial institutions’ confidence and motivation to participate in alleviating SMEs’ financing problems. Just for brainstorming, I proposed some potentially feasible government sponsored bank loan cost subsidization and loan guarantee schemes as shown in Figure 4 down below.
**Figure 4**
*Recommended Government Sponsored Bank Loan Cost Subsidization and Loan Guarantee Schemes*

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Objective</th>
<th>Targeted Beneficiaries (Eligibility)</th>
<th>Possible Sources of Funding</th>
</tr>
</thead>
</table>
| Loan Cost Subsidization Scheme | To cover partly or fully the extra cost incurred by banks because of their lending (financing) to SMEs | SMEs located in rural and semi-urban areas and principally use locally produced inputs for their production activities | • Government treasury  
• Levy from profits of large companies and the SMEs’ through their representative agencies  
• Contributions made by banks |
| SMEs Start-up Loan Guarantee Scheme | To provide wider financing accessibility for SMEs at their start-up stages | SMEs at their start-up stage, emphasizing their managerial, technical and other developmental policies related requirements* | • Government treasury,  
• Contributions from banks  
• Foreign donors  
• Contributions from the existing both SMEs and large-scale firms |
| Guarantee Fund for Women Entrepreneurs | To provide guarantee to financial institutions intend to lend to SMEs owned by women for the purpose of covering working capital and investment needs | For SMEs established, owned and operated by women entrepreneurs in both rural and urban areas (however, preferences can be given to those SMEs that have been already established or are to be established in the economically and infrastructural wise depressed areas) | • Government treasury  
• Foreign and domestic donor agencies and associations (like the National Women’s Association)  
• Private sector  
• Representative organizations (like Chamber of Commerce Industry, and other entrepreneurial and professional associations) |
| Special loan Guarantee Scheme | To increase the availability of funding (loan) for the purpose of start-up, expansion, and modernization of SMEs | For SMEs established by disadvantaged and promising citizens | • Government treasury  
• Local community at large contributions  
• Bilateral and multilateral donations  
• Contributions from profits of financial institutions and other private, parastatal and fully state owned business organizations (corporations) |

The aim of the above-proposed loan guarantees schemes is to cover in case a borrower defaults.

Both the government and the lender can share losses, due to defaults, proportionally.

Customarily, loan guarantee schemes usually cover 50 to 95% of the losses incurred from

*According to the macroeconomic policy of Botswana, government usually gives priority to the establishment of SMMEs engaged in the production of exportable goods.*
defaulting SMEs (OECD Comprehensive Report, 1995). The success of these types of schemes depends at least on the following general characteristics.

- They should be flexible and responsive to the changing needs and situations of borrowers, lenders, and the national economy.
- They should be appropriate, implementable and less bureaucratic. Potential beneficiaries should be able to benefit from them in the most feasible way.
- They have to be properly designed and efficiently administered in keeping with the spirit of the given legislation.
- They have to be in line with the formulated objectives, eligibility preconditions and working systems as a prerequisite for their success.
- They should have adequate budget necessary for fulfilling their mandated operation goals.
- They have to be effective, efficient and innovative in order to attract and convince client financial institutions to participate in the program and enhance their participation in financing SMEs.
- They should promote prudent responsibility on the part of borrowers and lender institutions.

In general, loan guarantee schemes should achieve financial autonomy without losing their main purposes. The main concern is how to implement the designed schemes related to the program. To streamline the implementation process, the schematic flow chart in Figure 5 might help. I designed this assuming that it might facilitate the challenging task of implementation. In
Botswana, CEDA and SBPA are in the best position to participate in the implementation of loan cost subsidization and guarantee programs.
Figure 5

Schematic Flow of Implementation Process of a loan guarantee scheme for SMEs Debt Financing

Start

Borrower submits an official loan request to a bank

The bank conducts the necessary evaluation to decide the eligibility of the loan request

Bank decision to grant loan based on the collateral (security) presented

Conclude an agreement to obtain the requested loan

Borrower obtains loan proceedings

Borrower makes periodic debt services to the lender to repay his/her obligation (loan outstanding)

If a borrower defaults?

Lender legally and technically attempts to force the borrower to fulfil loan repayment obligation

End

Stop

The agency investigates the credit worthiness, business prospects, economic viability and the debts servicing ability of the applicant (borrower)

Bank refers the applicant (borrower) to a suitable credit guarantee agency

Decision One
Does the borrower meet bank’s collateral requirements for obtaining a loan?

YES

NO

Decision Two
Is the applicant (borrower) qualified for the issuance of a loan guarantee certificate which enables getting the requested loan from the client bank?

YES

Agency decision to grant a loan guarantee certificate as a collateral (security) to borrow the required fund from a client bank.

Borrower returns to the bank with the loan guarantee certificate

Borrower makes periodic debt services to the lender to repay his/her obligation (loan outstanding)

If borrower has no means of settling his loan obligation

Lender formally request the loan guarantor agency for the settlement of the loan obligation (loan outstanding)

Reject the application

NO

End

Borrower may settle with the bank or other means the loan obligation (loan outstanding)
Direct Credit Grant Programs

These programs are popular in many countries including in the industrialized countries like, the USA, Germany, Canada and Japan. Government initiated direct credit grant programs helped a lot in strengthening fledgling SMEs (OECD, Report, 2001; American Recovery and Reinvestment Act of 2009). In the same way, GoB can launch and implement direct credit granting programs through its specialized agencies. As practiced in many countries, GoB can also delegate external organizations like banks and private and public organizations for this purpose. For example, GoB can grant direct subsidized loans to assist eligible SMEs located in rural and semi-urban as well as in economically and socially depressed areas. This helps to narrow disparities among different geographical areas in income, growth, migration and especially unemployment. To run these types of programs, mandated institutional capacities require details of eligibility criteria, loan administration procedures, repayment and security requirements and other loan related provisions. All these should be well formulated in advance. This and other initiatives discussed earlier are relevant and supportive, but they should be implemented in the best possible way.

Financing of Technical and Managerial Advisory and Extension Services

SMEs’ problems are not only access to finance, but also proper utilization of funds at their disposal. Acquiring funds is only one part in the dynamic SMEs financing scenario. Equally important is developing the ability to appropriately utilize and prudently manage the acquired funds. The lack of capacity to obtain funds at the right time, of the right type, in the desired amount, and at various stages is also another important weakness usually observable in many SMEs. We should provide SMEs the desired support for technical and managerial extension
services and capacity upgrading programs to develop these capabilities. This means that concerned governmental and parastatal institutional capacities should not only limited to providing funds. Rather, they should support SMEs to possess the ability to utilize their available funds in a proper and innovative way. Such services may include: co-sponsoring management training programs and workshops, providing training facilities (such as trainers, mentors and training kits) and informational materials, offering limited one-to-one counseling services to SMEs owners focusing on how to solve their business problems, providing technical, managerial and professional assistances.

Above all, effective implementation of schemes and focused action programs require possessing the capability to streamline, cluster, and properly manage SMEs’ financing initiatives. In sum, government programs should not be limited to granting finance only. It is imperative that many SMEs in Botswana desperately need professional help focusing on how to use their funds effectively and efficiently. It is a good idea that government and other stakeholders grant financial assistance for providing technical and managerial extension services through capacity upgrading and building programs. Such services may include.

- co-sponsoring management training programs, courses, conferences, seminars and workshops;
- providing trainers, speakers, panelists and moderators for training programs;
- providing training facilities, equipment and informational materials;
- offering limited one-to-one counseling services to SMEs’ owners and managers;
- helping SMEs’ owners/managers to identify and solve their business related problems;
- publicizing available free services to SMEs’ owners at a national, state and local levels;
helping to prepare and deliver management assistance through publications, radio, television and the print media (Adapted from SBA co-sponsorship programs, 1996),

Financing of technical and managerial training and advisory services’ schemes can be concentrated around the so-called Software Economic Infrastructure Development Programs. The Software and Hardware Economic Infrastructures can be broken down into two categories as Figure 6 shows. Hence, government can participate in software economic promotional programs
Figure 6
Vital Economic Infrastructures for SMEs’ Development

Economic Infrastructure (Macro)

Hardware Economic Infrastructure
- **Financial:**
  - Loan,
  - Loan guarantees
  - Equity participation
  - Direct financial grant
  - Special purpose financing schemes and programmes

- **Fiscal:**
  - Tax concessions,
  - Tax incentive schemes
  - Tax exemption services
  - Investment incentive programmes
  - Depreciation related provisions
  - Other related ones

- **Technological:**
  - Plant and machinery procurement assistance
  - Technological equipment leasing arrangement
  - Other assistance programmes for technological standardisation and improvement

Software Economic Infrastructure
- **Managerial and Entrepreneurial Training and Advisory Services:**
  - Marketing and product promotion
  - Financial management
  - Entrepreneurial incubation and enhancement
  - Human resources and organisational behaviour
  - Policies and strategies of business expansion
  - Other related small business management training programmes

- **Technical Training and Advisory Services:**
  - Industrial Promotion and technical competence
  - Quality control, product design and production management
  - Technical counselling
  - Crafts and comprehensive technical skill upgrading
  - Productivity and production efficiency enhancement counselling
  - Technological innovation and R & D promotional services

- **Information and Network:**
  - Marketing, information (both local and overseas)
  - Technological development information
  - New Business ideas
  - Information on innovation and their commercialisation
  - Investment information
  - General economic, political, and environmental information
  - Other information on SMEs’ opportunities and problems

**Source:** Adapted from Owualah, S., (1988), p.12, and Re-formulated by author
Required Legal and Policy Underpinnings for the Promotion of SMEs Financing

Lack of effective enforcement by a legal infrastructure makes the door open for financial dualism. Financial dualism is detrimental for business and economic development. It gives a room for manipulation and unproductive rent seeking activities that are harmful for the sustainable development of the national economy. The negative consequences of financial dualism have become a normal phenomenon in the majority of the developing countries of Africa, Asia and Latin America. The developed countries are not spared from this malaise. Todaro (2009) has rightly observed the harmful effect of the financial dualism particularly on the broad activities of SMEs in many developing countries. He said: “Most developing countries operate under a dual monetary system, a small and often externally controlled or influenced organized money market with severely binding legal restrictions on nominal interest rate ceilings, catering to the financial requirements of a special group of upper-class local and foreign businesses in the modern industrial sector, and a large but amorphous unorganized money market, uncontrolled, illegal, and often usurious to which most small and low income businesses are obliged to turn in times of financial need”.

The above statement asserts that highly unorganized, often externally dependent, and spatially fragmented financial system greatly impedes the growth of the national economic infrastructures in general and those of SMEs in particular. Therefore, we need to establish transparent and effective legal infrastructure to maintain an efficient financial system that fosters the growth of the national economy. This is indeed a major contributor to organized, economically interdependent, and functionally competent financial institutions, financial markets and financial instruments. As a result, prudently managed and leveraged financial resources can continuously flow in and out of savings banks, commercial banks, and other public and private
financial intermediaries with a minimum interference. Thus, a fully functional financial system strengthened in such a mode can make a noticeable contribution to the alleviation of SMEs financing problems. One of the chief causes of the economic crises in African countries during the last 40 years is the inept governance coupled with the adoption of conventional but largely irrelevant developmental policies and strategies directly copied from the developed countries (former colonial masters). Of course, Botswana has attempted to formulate and implement regulatory policies and legal underpinnings. However, the country should do more to advance, modernize and strengthen the institutional capacity of its financial sector to provide efficient services to the indigenous economic sectors including SMEs. The existence of judicious and workable legal and regulatory infrastructure can help SMEs to have better access to the financial resources available in the country. Figure 7 portrays the important position of the financial sector within the national economic system.

My recommendations on the legal acts and regulatory policies on facilitating the financing intricacies of SMEs in particular are shown in Figure 8. These recommended supporting legal and regulatory frameworks are intended to serve as a stepping-stone for more actions by the responsible government organs, principally the Bank of Botswana, Ministry of Commerce and Industry, Ministry of Finance, Office of the President, and institutions representing the private sector.
Figure 7
The Complex of Macroeconomic and Sectoral Relationships

Source: Adapted from Krahnen and Schmidt (1994) and re-formulated by author.
### Proposed Legal Acts and Regulatory Policies
#### Facilitating SMEs’ Financing

<table>
<thead>
<tr>
<th>Proposed Act</th>
<th>Purpose (Objective)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SMEs’ Development Agency Establishment Act</strong></td>
<td>To establish an agency at a national level with the objective of promoting SMEs. This is to stipulate the basic direction and policy of SMEs and accelerate their competitive growth. Additionally, the proposed SMEs’ development agency can establish different departments (or affiliated units) including one directly dealing with SMEs financing. As required, branch offices can also be established in different regions or localities of the country.</td>
</tr>
<tr>
<td><strong>SMEs’ Financing and Investment Promotion and Regulation Act (General).</strong></td>
<td>To secure the financial resources needed for the promotion of SMEs. The proposed Act may contain legal proceedings regulating, supervising, and facilitating financing and investment activities specifically pertaining to SMEs.</td>
</tr>
<tr>
<td><strong>SMEs’ Start-up Financial Support Regulation and Supervision Act.</strong></td>
<td>To provide for business venture start-up in order to contribute to the establishment of a sound industrial structure by promoting the establishment of SMEs. The Act may mainly concentrate on issuance of regulations on how to grant financial support to SMEs for start-up purposes. The proposed Act can include special legal provisions to encourage the establishment of SMEs in economically depressed regions.</td>
</tr>
<tr>
<td><strong>Establishment, Licensing and Supervision of the Micro-Financing Institutions and Small Business Investment Companies Act.</strong></td>
<td>To encourage the increased flow of finance to SMEs in both rural and urban areas in the form of loans, venture capital and/or equity investments and other means of financing. This is vital for the accelerated and sustainable growth of SMEs and to bring the activities of SMEs’ and other micro-level financing institutions (mini-banks) within the monetary and financial policies of the country.</td>
</tr>
<tr>
<td><strong>SMEs’ Credit Regulation and Control Act</strong></td>
<td>As a supplementary to the above proposed SMEs’ Financing Promotion Act, this proposed Act can be issued with the aim of regulating, supervising and controlling the effectiveness of lending programs. Lending programs may be designed and implemented by different formal lending institutions, mainly the commercial banks. This is with the objective of ensuring that the special loan programs of banks and other financial institutions targeting SMEs are effective and properly financed.</td>
</tr>
<tr>
<td><strong>SMEs Export Business Promotional Act</strong></td>
<td>To provide the necessary legal and regulatory framework to assist SMEs engaged in export business to get the necessary finance and to provide for other facilities, which can help them to further promote their export business and enhance their competitiveness and capacity.</td>
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### Concluding Remarks

In this paper, I raised the critical issues of SMEs financing as a pertinent issue. Like in other developing nations, Botswana SMEs have continued to suffer from the lack of access to finance due to multitude constraints. Some of them are discussed in this paper. The GoB is indeed in a better position to resourcefully engage in promoting SMEs. This is in line with its core
development agenda. That was the main reason for the President of the country to appoint a Presidential Task Force to investigate and identify core problems hindering the development of SMEs in the country. The task force comprehensive report identified, among others, some core problem pertaining to SMEs financing. As part of the solution, I proposed some government sponsored schemes, action programs and legal underpinnings. I categorized them under four packages namely: direct financial assistance schemes; loan guarantee schemes; direct credit grant schemes; and financing of technical and managerial advisory services. I am aware that SMEs’ financing scenario is formidable that demands a continued and joint efforts of all stakeholders. However, it is important to note that the primary goal is to stimulate SMEs to make efforts to meet their financing needs by strengthening their internal capabilities for attracting funds. Thus, we should expect SMEs to demonstrate their innovative endeavors by discovering viable sources of financing. While this is the main thrust of the broader efforts to secure support for SMEs, GoB has also a mandate to promoting SMEs including widening their access to finance at their different stages of developmental continuum. Various governments’ sponsored financing schemes and action programs should be earmarked for this purpose. Realistically, SMEs in Botswana and in other SSA nations cannot solve their financing problem solely through their own efforts particularly in the current globalized and turbulent business environment. Therefore, respective governments have an important role to play by assisting SMEs to enjoy substantial access to finance as a means for their sustained survival and growth. Government sponsored financing programs have been proved successful in many in both developed and developing nations. Therefore, government involvement in financing of SMEs can greatly contribute to alleviating financial problems of SMEs as a principal prerequisite for their active involvement in the dynamics of the national economy. It is also important to note that lending or granting money
to SMEs is not enough, but government through its relevant institutional capacities should also assist SMEs to develop the ability of efficient utilization of the financial capacity at their disposal. If Botswana needs to achieve sustainable socio-economic growth through efficiency and economic diversification, empowerment of SMEs is fundamental. However, granted assistance should be in its appropriate form and content in order to bring qualitatively measured strength to SMEs and enhances their development and competitiveness. SMEs should note that government is not a panacea for all their problems. They should consider that government sponsored assistance programs are limited in scope and outreach and cannot solve their financing problems entirely. They should deal with their financing problems in accordance with the dynamics of the conventional economic rationality. They should boldly confront the challenge and work harder to enhance their strength and marginalize their weaknesses within the dynamics of organizational competency and growth. They should always find themselves in a continuous improvement endeavors and thereby foster their competitiveness in attracting external finance in the smartest way. The productive alliance of government, SMEs, the financial institutions can be quite supportive for SMEs empowerment. Indeed well integrated, supported and synchronized SMEs will be more capable to lead the socio-economic development continuum in Botswana.
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i Pula is the name of Botswana Currency (legal tender) and the current exchange rate is: 6 Pula is equivalent to one US Dollar.
Practical Aspects of Relationship Lending: A Lender’s Perspective

by Felipe O. Calderon1

The paper focuses on the nature of interactions between small and medium-sized entrepreneurs (SMEs) and loan officers that define the quality of lending relationships. We examine interactions at the transaction level from the perspective of loan officers using ethnographic techniques. The paper provides insights into close-up behaviour of SMEs, which influences the nature of their relationship with loan officers. The paper includes a discussion on the realities and challenges of relationship lending and offers practical advice to educators and entrepreneurs. The evidence suggests that loan officers support SMEs who regularly provide financial information and demonstrate professional behaviour.

Introduction

This paper is about my experience as a practitioner/researcher participating and observing how loan officers interact with bank borrowers specifically small and medium-sized entrepreneurs (SMEs). The purpose of this paper is to investigate the nature of interactions between loan officers and SMEs. The paper seeks to answer the questions: how do loan officers and SME borrowers interact, and how do the resulting relationships affect access to additional financing and concessions. Relationship lending is a key ingredient in the viability of SMEs

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because it reduces informational opaqueness. This paper aims to improve our understanding of the role of interactions in relationship lending.

Banks are a major source of financing for SMEs. Unlike large corporations, access to bank financing can make or break the viability of SMEs. The first round of financing has always been challenging for SMEs, who are informationally opaque. Once financing is in place, banks play a critical role in providing additional financing and concessions particularly in times of financial distress. Examples of concessions are postponement and reduction of loan payments. Access to additional financing and concessions is influenced by the nature of interactions between loan officers and SMEs. This study includes a discussion of the transactions that form the foundation of multiple interactions between loan officer and SME from loan origination to maturity. Ethnographic techniques were employed to study interactions at the transaction level from the perspective of loan officers who are the front-line representatives of banks. The evidence suggests that loan officers support SMEs who regularly provide financial information and updates on plans and projects, and display professionalism in terms of returning telephone calls and emails, and showing up for meetings.

The paper unfolds in the following manner. First, existing literature is reviewed. Second, the research methodology is explained. Third, discussion on the nature of interactions is provided. Fourth, I will look into the realities and challenges of relationship lending. I will conclude with practical implications for educators and entrepreneurs and suggestions for further research.
Review of Prior Studies

The purpose in this section is not to conduct a comprehensive study of the literature on relationship lending but to bring out the gap. Udell (2008) offers the following description of relationship lending as defined by finance scholars:

Relationship lending is a type of loan underwriting that primarily depends on proprietary “soft information” about the borrower. Soft information is qualitative information acquired by the bank over time through multiple interactions with the borrower, often through the provision of multiple financial services (Boot, 2000). Soft information includes assessments of an SME’s future prospects, compiled from past interactions with its suppliers, customers, competitors, and other businesses and business associations in the local market.

According to Elyasiani and Goldberg (2004), it was Lummer and McConnell (1989) who identified that relationship lending is not built when banks enter into a new credit agreement but is acquired over time through multiple interactions with the borrower. The information generation over time plays a key role on whether additional financing will be provided in the future. However, existing literature is largely focused on empirical studies investigating the impact of relationship lending on collateral, interest rate, and loan workouts. Elsas (2005) and Garriga (2006) find that relationship between a bank and borrower is difficult to observe, hence it is an empirical task. As a result, a variety of proxies have been used in empirical studies to draw conclusions on the impact of relationship lending on loan terms and conditions. Duration of a bank-borrower relationship is one of most commonly used proxies in empirical work.
followed by the number of bank relationships and share of the borrower’s total debt. Ono and Uesgusi (2009) report that results of empirical studies have been mixed. Some studies observe that there exists a negative relationship between duration of bank-borrower relationship and collateral requirement while others obtain a positive relationship. Nam (2004) reached the same conclusion that empirical evidence on the merits and demerits of relationship lending is often mixed.

There are limited studies on the nature of interactions that define the relationship between the loan officer and the entrepreneur. One of the studies was prepared by Lehman and Neuberger (2001) based on a survey of German banks. They conducted a quantitative study which revealed that social interactions between the loan officer and bank manager have a positive influence on the availability and terms and conditions of loans. The data set was based on a survey completed by 1,200 bank loan managers in Germany in 1997. The survey included, among others, questions relating to the nature of the relationship between the loan manager and the SME such as nature of experience, willingness to provide information, and stability of the relationship.

Two studies identified the critical role of loan officers in the collection of soft information, which is the foundation of relationship lending. First, Scott (2006) investigated how turnover of loan officers affected the availability of credit to the entrepreneur. The relationship was empirically confirmed using data from the 1995 and 2001 Credit, Banks, and Small Business Surveys conducted by the U.S. National Federation of Independent Business. The study recognized the critical role of loan officers in the generation of soft information. Second, Uchida, Udell, and Yamori (2006) sought to test whether close relationships between the loan officer and entrepreneur led to accumulation of soft information and whether the accumulated
information was beneficial to opaque SMEs in the Japanese market. The data set of the quantitative analysis utilized the results of the Management Survey of Corporate Finance Issues of SMEs in the Kansai area. The study had mixed results and concluded that more research is needed in this area.

The literature on relationship lending has grown over the past decade. However, research has focused on the use of quantitative techniques based on survey-based data. Davidsson (2008) argues that questionnaires do not capture attitudes, personal traits, intentions, or real-world behaviours. The interaction dimensions of relationship lending are too dynamic and complex to be captured in survey-based research.

None of the existing research has studied the nature of the interactions that define the relationship between loan officer and entrepreneur. This paper contributes to the study of relationship lending by providing qualitative insights into the multiple interactions between loan officer and SMEs.

**Research Methodology**

The study is different because it does not use quantitative techniques based on survey-based data. I argue the importance of the methodological choice of studying relationship lending at the level of interactions. Ethnographic techniques were employed to study interactions at the transaction level from the perspective of loan officers who are the front-line representatives of banks. The ethnographic approach is ideal since the interaction dimensions of relationship lending are too dynamic and complex to be captured in survey-based research. The advantage
of ethnography is that the researcher is able to observe and hear what the entrepreneur would not openly discuss during structured interviews (Moeran, 2005).

It is important to recognize that qualitative ethnographic approach has its limitations relating to the objectivity of the researcher/participant and the restricted area of research (Neyland, 2008). However, the objective of this study is to provide practical insights and examples of real-life situations rather than measuring a phenomenon that involves soft issues where quantitative techniques may not be appropriate (Jack and Anderson, 2002). The insights and examples have been drawn from my 20 years commercial lending experience which spans from the Philippines, Hong Kong, and finally Western Canada involving SMEs in various stages of development including businesses in financial distress and turnaround situation.

In this paper, Canadian definition of an SME is being used which is an owner of a business that employs no more than 500 employees and generates sales of no more than $50 million Canadian dollars. The study is limited to loan officers who specialize in commercial loans. Commercial or business loans assist companies to finance the start-up of ventures, purchase of buildings, equipment, inventory, and to provide working capital.

**Focus on Interactions**

Transactions that transpire between a loan officer and SME after loan origination is under-researched in existing literature. Many researchers have alluded to the multiple transactions that shaped the lending relationship between loan officer and SME but no study has provided a detailed description. In addition, prior studies have focused on favourable terms and conditions
on additional credit as the primary benefit of relationship lending to the entrepreneur. Approval of the first loan is only the beginning of the relationship between the loan officer and SME. Many activities occur between loan origination and maturity that will have an impact on the quality of the lending relationship. What are these transactions that inevitably result in interaction between loan officer and SME? The following discussion will show that these transactions are not only administrative in nature but also include concessions, which are most needed during periods of financial stress.

**Initiated by the Loan Officer**

*Periodic review:* Loan officers are required to conduct a regular review of their accounts. Depending on the risk profile of the account, the review may be on an annual, semi-annual, or quarterly basis. The review involves an analysis of financial information and meeting with the SME borrower and an inspection of the charged assets, if applicable.

*Business development:* Loan officers call on their existing clients to source new loans. Loan officers have objectives to generate a minimum amount and number of loans per year. Therefore, loan officers regularly contact their clients to explore opportunities for new loans. For instance, if the borrower mentioned that there is a plan to purchase additional equipment after six months, then the loan officer will diarize to contact the client in the future. Loan officers also look at their existing clients as potential source of referrals for new loans. An existing client could introduce their loan officer to suppliers and customers.
Initiated by the SME

Reduction or postponement in payments: The SME borrower approaches the loan officer to reduce or postpone principal payments for a few months to assist cash flow. There are several possible reasons for this request. Common reason is the general slowdown in business due to the downturn in the economy. On the other hand, a request for reduction or postponement in loan payments is not necessarily a cause for concern. The company may have won a big contract which requires extra working capital to deliver the product or service.

Changes in personal and corporate arrangement: During the life of the loan, changes in the structure of the company may require consent from the bank. Changes in the ownership structure may require the bank to consent to release or add a personal or corporate guarantor.

Amendments to charged assets: The company may sell assets such as a parcel of land or equipment, which requires the Bank to release its charge on the asset. This may entail negotiation between loan officer and SME borrower on whether or not the bank’s loan will be partially paid down or not.

Realities of Relationship Lending

What really happens from the time an SME’s loan application is approved to full repayment? Following is a discussion of realities and behaviours that have been observed that either enhance or diminish the relationship between loan officer and borrower.
**Relationship Busters**

Loan agreements always include a condition for the borrower to submit year-end financial statements. In Canada, there are three types of the financial statements: Notice to Reader; Review Engagement; and Audited. The difference among the three types is the degree of assurance being provided by the professional accountant that the financial statements were prepared in accordance with generally accepted accounting principles. The degree of assurance for Notice to Reader is low, followed by medium for Review Engagement, and high for Audited financial statements. SMEs are usually required to submit Review Engagement financial statements. A common cause for concern is that some SMEs submit Notice to Reader year-end statements because they are cheaper to prepare. Following are some comments received by loan officers from SME-borrowers:

- Why do I have to submit Review Engagement financial statements, which are more expensive, when all my loan payments are up-to-date?

- I challenge the bank to call my loan because I only submitted Notice to Reader financial statements instead of Review Engagement.

With the above comments, it would be difficult for the loan officer to seek exception to accept the Notice to Reader financial statements when the borrower applies for additional financing or requests for a concession such as postponement of payments. It also becomes a challenge for the loan officer to complete the periodic review when the financial information does not comply with what was stipulated in the loan agreement. Periodic reviews are being
completed to categorize properly the customer’s risk profile, which dictates the Bank’s provision for loan losses.

As mentioned earlier, loan officers seek out to meet with existing clients as part of their periodic review and marketing activities to source new loans. Following are some comments received from loan officers:

- After several unreturned telephone messages, I was finally able to connect with the client and set up an appointment to discuss how things are going with the business. I was at the client’s office at the appointed time but the customer did not show up. No reason was provided for the absence.

- The client was outright suspicious of my request for a meeting. The client felt that it was an intrusion in the private affairs of the business.

At this point, it is important to highlight why loan officers are eager to develop a relationship with their clients. Loan officers’ compensation and career advancement are directly related to their capacity to book loans which generate fee and interest income for the bank. Experienced loan officers recognize that clients, at some point in their business cycle, will request for a concession to overcome temporary challenges. It is critical for the loan officer to be able to obtain approval for these concessions in order to develop customer loyalty which will hopefully result in additional loans or an introduction from the SME to suppliers and customers.
Relationship Boosters

It is equally important to present examples of entrepreneur behaviour that support the development of a positive relationship with the loan officer. Following are best practices of SMEs that have been repeatedly observed by loan officers:

- Many SMEs have considered their loan officer as part of the business family. SMEs proactively invite their loan officer to visit the company premises to give an update on the progress of the business including challenges.

- Loan officers appreciate SMEs who take the time to understand what the bank is looking for in its financial statements to ensure successful application for subsequent financing. Some SMEs, who are not adept with financial information, bring along their controller and sometimes the external accountant, to ensure a common understanding of what is required by the bank.

- Loan officers look for a professional relationship and not a social relationship. Loan officers are not comfortable being invited to family dinners or accepting gifts. What they are looking for is prompt submission of financial information and the SME’s openness to regular business meetings.

In a survey commissioned by the Canadian Bankers Associations (2009) on SMEs and bank relationships, it was identified that 92 percent of the SMEs revealed that having a face-to-face relationship with their lender as the most important factor in their relations with their banks.
This provides collaborative evidence that personal contact between loan officer and SME is a prerequisite to a successful lending relationship.

**Challenges of Relationship Lending**

Based on the foregoing discussions, it appears that there should be a natural tendency from loan officers and SMEs to create a harmonious lending relationship. From the point of view of loan officers, a close relationship with the SMEs translate to more loans in the future which means higher compensation and career advancement. From the SME’s perspective, a positive relationship with the loan officer means the possibility of more financing and concessions in the future. Based on this premise, the information asymmetry of SMEs should no longer exist, however this is not the case in the real world. What are then the challenges that prevent relationship lending from happening?

**Turnover of Loan Officer**

Frequent turnover of loan officers is a reality in the banking industry. SMEs have expressed their frustration over dealing with too many loan officers during the life of the loan. The reasons for the turnover in loan officer are either internal or external. Internal turnover is usually a result of the loan officer either being promoted to a senior position or being transferred to a different job within the bank. External turnover is due to either voluntary or involuntary departure of the employee. Many business graduates apply for a loan officer position only to find out that it is not the dream job they have expected it to be. SMEs should learn to accept that loan officer turnover is one of the challenging realities of relationship lending. It is recommended that SMEs should develop a strategy in dealing with loan officer turnover as if it is
part of their daily business activities. Best practices that have been observed include the following:

- Invite the new loan officer to the business premises and provide a tour of the facilities.
- Maintain copies of documents and whenever possible, confirm discussions by email to ensure a paper trail through which the new loan officer can pick up any negotiations.
- Maintain contact with both the loan officer and the next level supervisor to ensure continuity of relationship if one of the two bank employees should move on.

The old adage “if you can’t beat them, join them” is truly applicable to SMEs when it comes to loan officer turnover. Some SMEs continue to complain about this phenomenon while others have moved on to embrace this reality and have formulated strategies to deal with it.

*Asset versus Liability*

SMEs continue to identify the loan officer with the debt recorded as a liability in the balance sheet. There is a need to educate SMEs that their loan officer should be considered as an asset that could be mobilized to achieve business objectives. The recent financial crisis highlighted the importance of the loan officer as an additional resource to SMEs. Loan officers may not possess hands-on entrepreneurial experience but they have witnessed both good and bad business practices. The more experienced loan officers have seen their clients successfully or unsuccessfully weather obstacles through bust and boom economic cycles. In addition, the loan officer’s belief in the company can sometimes make the difference between approval and decline of a loan application or financial concession. It has been observed that some loan officers would put their reputation on the line to support an SME’s application. Bank authorizing officers can
sometimes be convinced by the loan officer’s passion towards the SME’s business. At the end, a banking relationship is both an asset and liability and it is up to educators and business advisors to convince SMEs that a strong lending relationship is the key to mitigate information opacity.

**Friend or Foe**

There is a perception among SMEs that loan officers are like bureaucrats who enjoy a stable job and regular pay. There is a misconception that being a loan officer is a 9 to 5 job from behind an office desk. Being a loan officer is almost entrepreneurial. Commercial loan officers act as salespeople, which involve frequent travel to persuade firms to obtain financing from their institution. Loan officers also maintain relationships with other professionals who may refer potential loan applicants. These professional include commercial realtors, equipment suppliers, accountants, and lawyers. Loan officers belong to chambers of commerce and other business associations to increase their presence in the local community. Their day could start with an early business breakfast meeting and end with a dinner function. Some loan officers have been known to meet clients after office hours and even on weekends. Loan officers, like entrepreneurs, face the uncertainty of when the next sale or loan will occur. Every time loan officers recommend a loan, they put their reputation and career on the line hoping that the financing will not turn into a bad loan. Sometimes, SMEs get very frustrated and agitated during loan origination when they feel too many questions and documents are being asked by the loan officer. It has happened so many times that the relationship has been damaged even before it got started. It is important for SMEs to recognize that loan officers speak on their behalf to the bank executive who authorizes the loan. When loans are declined, loan officers are equally penalized because they too have invested the time and effort which could have been spent with another loan applicant.
**Implications for Practice and Research**

The practical value of this paper is to increase the awareness among entrepreneurs, researchers, educators, and business advisers that interactions with loan officers are critical to the viability of small and medium-sized businesses. There appears to be too much emphasis on the preparation of business plans but lacking in coaching entrepreneurs on how to manage relationships. There is a proliferation of academic research that provides evidence that a strong lending relationship is beneficial to SMEs because it reduces information asymmetry. Therefore, educators should train future SMEs to develop a strategy on how to reduce information opacity to ensure favourable terms and conditions on loans and subsequent financing, and approval of requests for concessions. I have barely scratched the surface of financial concessions which is a topic that is under-researched. Further studies in relationship lending should consider looking into financial concessions as equally important as obtaining additional financing.

SMEs should learn to recognize that a relationship with their loan officer is part of their social capital and business network. Researchers have suggested that social capital and interfirm alliances are a source of competitive advantages (Stuart and Sorenson 2007; Schreiner, Prashant and Corsten, 2009). There is an inherent focus among SMES on elaborate marketing plans supported by complex financial forecasts. There is a need to expand the focus on how to build effective networks with their financing sources and utilize loan officers as part of a resource for advice and best practices.
There is no universal definition of SME. There is a need to break down the definition in terms of micro, small, and medium business in order for research to be more relevant. It is apparent that a business owner with only 10 employees has a different approach to relationship with the loan officer than a business owner with 100 employees. In the latter, it is possible that the chief financial officer or Controller is the primary contact of the loan officer. What are the implications to relationship lending when the business owner delegates responsibility of interacting with the loan officer to an employee?

Finally, this paper could be extended by investigating how immigrant entrepreneurs differ in their interactions with their loan officer compared to local business owners. Further studies could also contribute to broadening our understanding of the globalizations of SMEs. When SMEs open expand overseas, it is possible that financing will be required from banks in the host country. It would be interesting to study the interaction between SMEs from a foreign country and loan officers of the host country.

References


Cross-border educational programs offer some of the most transformational experiences of a college student’s education. This paper presents the results of a study of the effects of cross-border education for undergraduate and graduate business students. Consistent with previous research, we discover significant impacts to personal, spiritual, educational, social, and career development for both male and female business students. Females, however, experienced significantly greater impacts of study abroad than males in several key areas, especially within personal development and gaining business acumen, areas that are highly pertinent to building global entrepreneurial skills.

**Keywords:** transborder education, business education, gender, female entrepreneurship development, female leadership development, travel study programs
The impact of leadership and strategic planning on management performance of SME’s in the built environment

by ¹Watson Ladzani, Nico Smith and Leon Pretorius

Abstract

This study investigated and established the impact that leadership and strategic planning management functions have in improving small and medium-size enterprises’ (SME’s) performance. The primary objective was to establish the extent to which SME’s in the construction industry in the study area utilise leadership and strategic planning to enhance continuous improvement in management performance. Primary data were collected from 326 respondents through the use of structured interviews. These respondents were from 64 randomly selected SME’s in the built environment. The findings show the need to educate SME owners/managers on the use of appropriate management measurement tools and to strengthen the implementation of the leadership and strategic planning functions in order to improve SME’s’ management performance. These findings suggest that specific management function-focused courses should be designed and implemented. Rewards of SME’s that show signs of continuous improvement should be introduced.

Keywords: Built environment, leadership, performance management, small business, strategic planning

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Introduction

The building construction industry creates numerous economic opportunities for small and medium-size enterprises (SME’s) in South Africa (Lanor, 2008:1). This industry is a significant employer, accounting for up to 70 per cent of a nation’s capital stock, which in South Africa is about R1.2 trillion (Van Wyk, 2003:1).

The South African government recognizes the building construction industry as a national asset to be developed, maintained and transformed through policy, as well as institutional and practical initiatives (Construction Industry Development Board [CIDB], 2004:6). At the operational level, the industry needs to improve its management performance in line with modern global developments.

The challenges facing the construction industry in South Africa include housing and electricity backlogs as well as millions of people without access to clean water and adequate sewerage (CIDB, 2004:6). Large building construction companies typically need the assistance of SME’s to address these backlogs. SME’s, however, need strong leadership and strategic planning skills in order to manage their performance effectively.

Since the concern in this study is that SME’s lack strong leadership and strategic planning skills, it is important to determine the impact that leadership and strategic planning have on management performance of SME’s in the built environment.

In addressing this research question, this paper reports on the research conducted using the South African Excellence Model (SAEM) to establish the impact on management performance of SME’s.
The primary objective of this paper is to investigate the extent to which SME’s in the construction industry in Gauteng Province, South Africa, utilise leadership and strategic planning to enhance continuous improvement in management performance.

Secondary objectives were to profile sampled SME’s in the construction industry, measure leadership and strategic planning management performance functions, identify the strengths and areas for improvement of these functions, and recommend action plans for areas requiring improvement.

**Literature Review**

Leadership and strategic planning are key aspects in the success of any business. Measuring their performance is therefore of critical importance.

**Impact of performance measurement on leadership**

Leadership is a process or action that affects the actions of an organised group that is working towards certain goals. The main qualities of a leader are long-term strategic thinking, communication skills, integrity and ambition. Leadership usually refers to motivating and committing people (Ukko, Tenhunen & Rantanen, 2007:40).

Leadership development enhances management and leadership capability, which in turn contributes to increased performance. Adequate or excellent management and leadership capability can be learnt and developed (Burgoyne, Hirsh & Williams, 2004:2, 6).
McAdam and Kelly (2002:14) reported that there is evidence that leaders in SME companies are committed to improving the SME’s’ companies. Furthermore, it is clear that leaders involve and empower employees in this improvement process. What is not evident, however, is how leaders assess the effectiveness of their leadership and determine appropriate improvements within these participating SME’s.

Bolden (2007:42) emphasised the importance of leadership in organisations of all sizes and the pressing need to address leadership development in SME’s, in particular. Furthermore, leadership support from government and educational institutions tends not to reach SME’s. Reasons for this could be attributed to differing agendas of the public and private sectors and inappropriate modes of delivery.

CEML (2002:3) warns about the lack of leadership in management and stresses that poor leadership and inadequate management within the company are the prime reasons for SME’s’ failure within their first three years of operation.

Impact of performance measurement in strategic planning

The impact of performance measurement in strategic planning is vital. Tapinos, Dyson and Meadows (2005:371–372) reported that performance measurement helps managers to identify skilful performance and is an indicator to corporate management of when it is necessary to intervene, such as when business performance is deteriorating.

Strategic planning has received significant research attention over the past three decades. While results vary, evidence suggests that formal strategic planning is related to superior performance (Gibbons & O’Connor, 2005:171). Recent research findings show
that strategic planning among SME’s is increasing because owner-managers increasingly look to strategy in their quest for competitive advantage (O’Regan & Ghobadian, 2007:15).

Many SME’s are transforming in pursuit of performance improvement. O’Regan and Ghobadian (2007:15) reported an increase in the number of SME’s deploying formal strategic planning. Their findings indicated more than half of all SME’s engaging in formal strategic planning.

However, the ideal state, where most SME’s perform well, has still not been reached. For example, Gibbons and O’Connor (2005:172) reported that the absolute level of planning is relatively low amongst SME’s. This low performance is attributed to, amongst other things, inadequate knowledge of the processes involved, lack of sufficient management expertise, lack of time to plan in a structured manner, lack of time available for non-operational activities and lack of human resources.

It is contended that personnel are involved in managing daily work and have no extra time for additional activities, such as implementing strategic planning (Garengo, Biazzo & Bititci, 2005: 28–29).

Methodology

The research instrument and research approach utilised in this paper are addressed in the following sections.
Research instrument

Primary data were collected through face-to-face interviews, using the Performance Excellence Self-assessment Questionnaire (PESQ). PESQ is a computer-aided matrix questionnaire research tool. The collected quantitative data were then used to investigate the impact that leadership and strategic planning have on the management performance of the selected SME’s in the construction industry.

Research approach

An evaluative, exploratory and comparative analysis research design was used for data generation and analysis (Hofstee, 2006:124–6; Neuman, 2006:33–5). The reason for this design was that the study evaluated, explored and compared the scores of management performance criteria with world-class and Southern Africa Development Community (SADC) best practice.

Leadership and strategic planning management performance criteria were ranked and compared with one another.

Management performance of SME’s was evaluated on a scale from zero to four. SME’s that scored zero and one in management performance were regarded as being weak in management performance. Those that scored two were regarded as having made good progress, those that scored three were considered best in SADC (substantial progress), and those that scored four were considered world-class, having fully achieved best practice (SAFRI, 2004:5).
Table 1 presents a summary of the representation and interpretation of the scale code of scores and their corresponding percentages, as explained above.

### Table 1 Representation and interpretation of scale code

<table>
<thead>
<tr>
<th>SCALE CODE</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Percentages</td>
<td>0</td>
<td>≤ 25</td>
<td>≤ 50</td>
<td>≤ 75</td>
<td>≤ 100</td>
</tr>
<tr>
<td>Interpretation</td>
<td>Not started</td>
<td>Some progress</td>
<td>Good progress</td>
<td>Substantial progress</td>
<td>Fully achieved</td>
</tr>
</tbody>
</table>

The data analyses were done using the SPSS software package and an electronic self-assessment programme (*Batlisisa*).

### Sample and responses

Two sub-populations of building construction SME’s in Gauteng were used for the study, namely the Gauteng Master Builders Association (GMBA) and the Construction Industry Development Board (CIDB). The reason for sampling from the GMBA and the CIDB populations was that these organisations contain registers of leading role players in the industry. The population size of the GMBA was 557 SME’s,

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2 *Batlisisa* is a South African electronic self-assessment programme, developed in 2003 by Ideas Management Southern Africa cc (now operating as Centre for Excellence). This programme was based on the SAEM and the management performance excellence criteria.
while that of CIDB was 532 SME’s. The study population was therefore based on 1 089 SME’s.

Proportional, stratified, random sampling was used to select a representative sample of these SME’s.

The study followed a sampling ratio of 10 per cent, as guided by Neuman (2006:241). The population and the sampling size were therefore calculated as follows:

The total population is \( N = 557 + 532 \)

\[ = 1 089 \]

The sample size is \( n = N \times \text{sampling ratio} \)

\[ = 1089 \times 0.1 \]

\[ \approx 109 \]

Table 2 summarises the population, sample, response and employees interviewed in the GMBA and the CIDB.

Table 2  SME’s’ population, sample, response and employees interviewed

<table>
<thead>
<tr>
<th>Study area</th>
<th>Population size</th>
<th>Sample population</th>
<th>Response rate</th>
<th>No. of employees interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>n</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>GMBA</td>
<td>557</td>
<td>56</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>CIDB</td>
<td>532</td>
<td>53</td>
<td>10</td>
<td>34</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1089</td>
<td>109</td>
<td>10</td>
<td>64</td>
</tr>
</tbody>
</table>
A simple random sample of 64 SME’s responded from a possible 109. This gave an average response rate of 59 per cent. This sample was distributed as 54 per cent from the GMBA and 64 per cent from the CIDB.

A total of 326 employees were interviewed to answer questions about the sampled SME’s. These employees were purposively selected, based on the total number of employees in a business and their availability at the time of the interview. They represented staff at all levels, namely top management, middle management, lower management and labourers. The number of employees interviewed per business varied from one to 21 employees. The reason for this variation was due to employment variation in businesses.

The equality of variances tests were conducted to determine the variations in responses where only one respondent represented an SME compared with where the SME’s were represented by several respondents. Levene’s test of variances (Field, 2000:6) was used for this purpose. The results of the tests revealed that there was no statistical evidence from the data to show any difference/variance in responses between SME’s consisting of only one employee and those consisting of several employees.

Findings

The study reported and discussed the profiles of sampled SMEs, leadership performance measurement, strategic planning performance measurement and leadership and strategic planning performance gaps.
Profile of sampled SME’s

This study profiled the age group of the sampled SME’s’ owner-managers, their educational qualifications, age of the business, types of ownership and the management performance measuring instruments these businesses use.

Age groups of owner-managers

The age profile range of the SME owner-managers interviewed was as follows: 22 (34.4%) were 40 to 49 years old; 15 (23.4%) were 30 to 39; 13 (20.3%) were 50 to 59; 11 (17.2%) were 20 to 29; two (3.1%) were 60 and older; and one (1.6%) was younger than 20 years.

Table 3 summarises the age profile of the sampled SME owner-managers.
Table 3  Owner-managers’ age groups

<table>
<thead>
<tr>
<th>Owner-managers’ age interval</th>
<th>Number of owner-managers</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20 years</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>20–29 years</td>
<td>11</td>
<td>17.2</td>
<td>17.2</td>
<td>18.8</td>
</tr>
<tr>
<td>3–39 years</td>
<td>15</td>
<td>23.4</td>
<td>23.4</td>
<td>42.2</td>
</tr>
<tr>
<td>40–49 years</td>
<td>22</td>
<td>34.4</td>
<td>34.4</td>
<td>76.6</td>
</tr>
<tr>
<td>50–59 years</td>
<td>13</td>
<td>20.3</td>
<td>20.3</td>
<td>96.9</td>
</tr>
<tr>
<td>60 years and older</td>
<td>2</td>
<td>3.1</td>
<td>3.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Educational qualifications of owner-managers

The respondents’ educational qualification profile was as follows: 21 (32.8%) held a first degree/diploma; 20 (31.3%) had completed Grade 12 (N3); nine (14.1%) held a BTech/Honours degree; six (9.4%) had completed Grades 8 to 11; and five (7.8%) held a master’s/MTech degree. Finally, one (1.6%) had completed Grades one to seven (Further Education and Training) (FET), General Education and Training (GET), and had no formal qualification.

Figure 1 summarises the educational qualifications of the sampled SME owner-managers.
It can be concluded that most (54.7%) of the respondents had tertiary qualifications (32.8% had first a degree/diploma, 14.1% had a BTech/Honours degree and 7.8% had a master’s/MTech degree).

Age of sampled SME’s

Of the sampled businesses, 16 (25.0%) had existed for three to five years; 15 (23.4%) had existed for more than 11 years; 12 (18.8%) had existed for 7 to 9 years; 10 (15.6%) had been in existence for 5 to 7 years; 5 (7.7%) had been in existence for 9 to 11 years; 4 (6.3%) had been in existence for 1 to 3 years; and 2 (3.1%) had been in existence for less than a year.
Figure 2 summarises the age of the sampled businesses.

![Histogram showing age distribution of sampled businesses](chart)

**Figure 2 Age of the businesses**

It can be concluded from figure 2 that most (90.6%) of the sampled businesses had been in existence for three or more years. These businesses had therefore passed the critical stage of survival of three years (Mtshali, 2007:11).

**Types of ownership**

The types of ownership of the respondents’ businesses were as follows: 50 (78.1%) were close corporations; nine (14.1%) were private companies; two (3.1%) were public companies; two (3.1%) were sole traders; and one (1.6%) was a partnership.

Figure 3 summarises the types of ownership of the sampled SME’s.
It can be concluded from figure 3 that the most common types of business ownership, accounting for 59 (87.2%) of the sampled businesses, were the close corporation and private company (78.1% close corporations and 14.1% private companies).

SME’s’ management performance measuring instruments

The responding owner-managers were asked to indicate the management performance measurement instruments used in their business. A total of 53 SME’s responded to this question. Of those SME’s that responded to this question, 31 (58.5%) used financial statements; 12 (22.6%) used quality management; five (9.4%) used balanced scorecards; two (3.8%) used value chain management and other (unspecified)
performance management instruments; and only one (1.9%) used ISO 9000. None of the respondents used the South African Excellence Model.

Table 4 summarises the sampled SME’s’ management performance measuring instruments.

Table 4 SME’s’ management performance measuring instruments

<table>
<thead>
<tr>
<th>Performance instruments</th>
<th>Extent of use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of SME’s</td>
</tr>
<tr>
<td>Balanced scorecard</td>
<td>5</td>
</tr>
<tr>
<td>ISO 9000</td>
<td>1</td>
</tr>
<tr>
<td>Quality management</td>
<td>12</td>
</tr>
<tr>
<td>Value chain management</td>
<td>2</td>
</tr>
<tr>
<td>SA Excellence Model</td>
<td>-</td>
</tr>
<tr>
<td>Financial statements</td>
<td>31</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>N</td>
<td>53</td>
</tr>
</tbody>
</table>

Leadership performance measurement

The SAEM, which is a self-assessment management performance tool, was used to measure the leadership performance scores. Ten questions were asked regarding the leadership performance measurement criterion. Using the representation and interpretation of scale code (see table 1), the respondents’ scores for the different questions/focus areas and their corresponding consolidated scores are as follows: 12.7 per cent of the responding SME’s had not yet started to address the ten focus areas; 15.9 per
cent had made some noticeable progress, namely less than 25 per cent achievement; 25.2 per cent had made good progress, namely 25–50 per cent achievement; 22.6 per cent had made substantial progress, namely 50–75 per cent achievement; and 23.6 per cent had achieved most of what was required in the criterion.

Table 5 shows the ten questions/focus areas asked/covered and their corresponding consolidated scores.
Table 5  Leadership performance measurement

<table>
<thead>
<tr>
<th>Questions/Focus areas</th>
<th>SCORES OBTAINED</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
</tr>
<tr>
<td>1 All managers are proactive in sustaining continuous improvement.</td>
<td>35</td>
<td>10.8</td>
<td>51</td>
<td>15.7</td>
<td>87</td>
<td>26.8</td>
<td>56</td>
<td>17.2</td>
<td>96</td>
</tr>
<tr>
<td>2 Managers are able to demonstrate their external involvement in promotion of total</td>
<td>.31</td>
<td>9.5</td>
<td>50</td>
<td>15.3</td>
<td>75</td>
<td>23.0</td>
<td>89</td>
<td>27.3</td>
<td>81</td>
</tr>
<tr>
<td>quality management as a business philosophy based on their own experience.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Managers have a consistent approach towards continuous improvement across the unit.</td>
<td>36</td>
<td>11.0</td>
<td>53</td>
<td>16.3</td>
<td>94</td>
<td>28.8</td>
<td>66</td>
<td>20.2</td>
<td>77</td>
</tr>
<tr>
<td>4 The management team is proactive in valuing, recognising and rewarding all</td>
<td>50</td>
<td>15.3</td>
<td>52</td>
<td>16.0</td>
<td>71</td>
<td>21.8</td>
<td>78</td>
<td>23.9</td>
<td>75</td>
</tr>
<tr>
<td>employees for continuous improvement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Managers are visibly involved in the development and support of improvement</td>
<td>61</td>
<td>18.7</td>
<td>42</td>
<td>12.9</td>
<td>89</td>
<td>27.3</td>
<td>66</td>
<td>20.2</td>
<td>68</td>
</tr>
<tr>
<td>teams and act as champions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 A process is in place to ensure managers are working with customers and suppliers,</td>
<td>32</td>
<td>9.8%</td>
<td>43</td>
<td>13.2</td>
<td>85</td>
<td>26.2</td>
<td>80</td>
<td>24.6</td>
<td>85</td>
</tr>
<tr>
<td>and that the effectiveness of the process can be assessed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 A process is in place to ensure managers are visibly involved as role models in</td>
<td>42</td>
<td>12.9</td>
<td>55</td>
<td>16.9</td>
<td>73</td>
<td>22.5</td>
<td>83</td>
<td>25.5</td>
<td>72</td>
</tr>
<tr>
<td>organisation improvement within the unit. The effectiveness of the process is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reviewed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 A process is in place to ensure mutual understanding of organisation issues</td>
<td>46</td>
<td>14.2</td>
<td>55</td>
<td>16.9</td>
<td>73</td>
<td>22.5</td>
<td>80</td>
<td>24.6</td>
<td>71</td>
</tr>
<tr>
<td>through two-way communication, both vertically and horizontally, throughout the unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 A process is in place to create and continually increase an awareness of the</td>
<td>45</td>
<td>13.8</td>
<td>65</td>
<td>19.9</td>
<td>81</td>
<td>24.8</td>
<td>71</td>
<td>21.8</td>
<td>64</td>
</tr>
<tr>
<td>organisation issues throughout the unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 The management team has a process in place to develop its own awareness of the</td>
<td>36</td>
<td>11.0</td>
<td>51</td>
<td>15.6</td>
<td>92</td>
<td>28.2</td>
<td>68</td>
<td>20.9</td>
<td>79</td>
</tr>
<tr>
<td>concepts of total quality management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidated scores</td>
<td>414</td>
<td>12.7</td>
<td>517</td>
<td>15.9</td>
<td>820</td>
<td>25.2</td>
<td>737</td>
<td>22.6</td>
<td>768</td>
</tr>
</tbody>
</table>

Figure 4 summarises the consolidated scores in table 5.
It can be concluded that most (25.2%) of the respondents made good progress in the leadership criterion, while a few (12.7%) had not yet started.

**Strategic planning performance measurement**

A similar measurement tool and approach to the leadership performance measurement were used for the strategic planning performance measurement. The respondents’ scores for the different questions/focus areas and their corresponding consolidated scores are as follows: 28.8 per cent had made no progress in addressing the ten focus areas of the strategy and planning criterion of management performance; 19.1
per cent had made some progress; 23.9 per cent had made good progress; 17.6 per cent had made substantial progress; and 10.6 per cent had made all the progress required in the criterion.

Table 6 shows the ten questions/focus areas asked/covered and their corresponding consolidated scores.
Table 6  Strategy and planning performance measurement

<table>
<thead>
<tr>
<th>Questions/Focus areas</th>
<th>Scores Obtained</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
<td>%</td>
<td>Count</td>
</tr>
<tr>
<td>1  Mission and organisation policy statements cover the whole of the organisation, and everyone understands them.</td>
<td>98</td>
<td>30.1</td>
<td>50</td>
<td>15.3</td>
<td>75</td>
<td>23.0</td>
<td>59</td>
</tr>
<tr>
<td>2  A process is in place to analyse &quot;best in class&quot; strategy and modify unit plans as a result, in order to develop and sustain a service excellence organisation.</td>
<td>91</td>
<td>27.9</td>
<td>54</td>
<td>16.6</td>
<td>87</td>
<td>26.7</td>
<td>63</td>
</tr>
<tr>
<td>3  The policy and strategy processes are benchmarked.</td>
<td>105</td>
<td>32.2</td>
<td>56</td>
<td>17.2</td>
<td>73</td>
<td>22.4</td>
<td>58</td>
</tr>
<tr>
<td>4  A process is in place to modify policy and strategy as a result of organisation and operational information.</td>
<td>88</td>
<td>27.0</td>
<td>56</td>
<td>17.2</td>
<td>90</td>
<td>27.6</td>
<td>56</td>
</tr>
<tr>
<td>5  A process is in place to assess the continuing relevance of plans as a result of organisation and operational information.</td>
<td>76</td>
<td>23.3</td>
<td>72</td>
<td>22.1</td>
<td>72</td>
<td>22.1</td>
<td>64</td>
</tr>
<tr>
<td>6  The unit has policy statements and strategy that cover the eleven performance improvement matrix headings.</td>
<td>107</td>
<td>32.8</td>
<td>67</td>
<td>20.6</td>
<td>66</td>
<td>20.2</td>
<td>52</td>
</tr>
<tr>
<td>7  A process exists, subject to review, which promotes a clear understanding of the organisation and unit's critical success functions (csfs) and policy statements, so everyone knows and understands them.</td>
<td>92</td>
<td>28.2</td>
<td>63</td>
<td>19.3</td>
<td>79</td>
<td>24.2</td>
<td>51</td>
</tr>
<tr>
<td>8  A process is in place to collect relevant external information to enable a review of csfs and organisation plans.</td>
<td>99</td>
<td>30.4</td>
<td>76</td>
<td>23.3</td>
<td>72</td>
<td>22.1</td>
<td>52</td>
</tr>
<tr>
<td>9  A process is in place to collect relevant internal information to enable a review of csfs and organisation plans.</td>
<td>86</td>
<td>26.4</td>
<td>67</td>
<td>20.6</td>
<td>92</td>
<td>28.2</td>
<td>56</td>
</tr>
<tr>
<td>10 The unit management team has developed a mission statement and csfs.</td>
<td>97</td>
<td>29.9</td>
<td>62</td>
<td>19.1</td>
<td>71</td>
<td>21.9</td>
<td>62</td>
</tr>
<tr>
<td>Consolidated scores</td>
<td>939</td>
<td>28.8</td>
<td>623</td>
<td>19.1</td>
<td>777</td>
<td>23.9</td>
<td>573</td>
</tr>
</tbody>
</table>

Figure 5 summarises the consolidated scores in table 6.
It can be concluded that most respondents (28.8%) had made no progress in the focus areas and only a minority of respondents (10.6%) had fully achieved the criterion.

**Leadership and strategic planning performance gaps**

Leadership and strategic planning criteria for management performance yielded wide gaps amongst the sampled SME’s interviewed. Whilst 12.7 per cent on the leadership criterion showed that they have not yet started addressing the leadership focus areas, 28.8 per cent on the strategic planning criterion have not yet started addressing the strategic planning focus areas. Only 10.6 per cent have fully achieved the strategic
planning focus areas, whilst 23.6 per cent have fully achieved addressing the leadership focus areas.

Figure 6 summarises the gaps between leadership and strategic planning management performance criteria.

![Figure 6 Leadership versus strategic management performance scores](image)

**Figure 6**  Leadership versus strategic management performance scores

It can be concluded that when the leadership management performance increases, the strategic planning management performance decreases.
**Conclusion and recommendations**

The profiles of the sampled SME’s reveal that most (54.7%) owner-managers have post-matriculation qualifications. Educational qualifications are therefore not a factor that hinders owner-managers in implementing leadership and strategic planning functions to improve their business management performance.

The findings of this paper further reveal that most (90.6%) of the sampled businesses had been in existence for three or more years. These findings show that the age of the business does not contribute to the owner-managers’ failure to strengthen the use of leadership and strategic planning skills to improve their management performance.

Most (58.5%) of the sampled SME’s make use of financial statements to measure their management performance. However, financial statements alone are not sufficient as a measure of management performance.

Since most SME’s are not utilising their strategic planning skills to improve their management performance, it can therefore be concluded that the sampled SME’s need more drastic measures to encourage them to grow, considering that educational qualifications and age of the businesses are not contributing to their lack of growth.

It is therefore recommended that the building construction industry SME owner-managers do the following:

- Prioritise and make interventions on the strategic planning management performance criterion, since it showed poor ratings in the survey. Priorities should be considered in terms of both the criterion’s low scores and the scores of the individual focus areas in this criterion. (Note: each criterion has ten focus areas.)
• Promote the use of a standardised management performance instrument, such as SAEM. This management performance improvement measuring instrument could become a powerful tool for improving the individual SME’s’ management performance, as well as for industry and international benchmarking purposes.

• Involve employees in the continuous management performance improvement self-assessment of the business. Training programmes could be developed and presented through the local building construction industry associations.

• Benchmark strategic planning management performance scores against industry, SADC and world-class best practice scores. The building construction industry scores for benchmarking purposes in South Africa are unknown, therefore this paper’s findings could serve as the South African industry scores.
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Understanding Motivation, Empowerment and Sustainability Outcomes of Women Homestay Entrepreneurs in West Malaysia. A Preliminary Analysis.

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The participation of women in the homestay industry is a growing phenomenon; yet research in this area is limited especially in Malaysia. Anticipating the potential contribution of homestay industry to the Malaysian tourism agenda, it is deemed timely that research on women in homestay industry be undertaken to understand their entrepreneurial pursuit. This paper details the demographic profiles, factors that motivate and empower women homestay entrepreneurs and their views on sustainability of homestay operations. 483 women homestay operators sampled from the homestay directory, Ministry of Tourism, Malaysia participated in face-to-face survey interviews. The assistance of trained enumerators residing in the sampling site was utilized. The findings reveal that majority of the women homestay entrepreneurs are between the age of 41 to 60 with 89.9 percent completed their lower secondary education, fully own but operate the homestay business on a part-time basis. They were motivated by the “pull factors” (personal satisfaction, passion and encouragement by friends) as opposed to the “push factors” (economic depression, unemployment, retrenchment, and dissatisfaction with former jobs). In addition, these women experienced a moderate to high level of empowerment, especially in terms of getting access to training and education services, as well as making decisions on matters related to the business. These women respondents view economic and social benefits as more rewarding than that of environmental. The regression analysis reveals that motivation and empowerment of women

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homestay entrepreneurs are significantly related to both economic and social sustainability and to a lesser extent environmental sustainability. The findings concur that women are important players in the homestay industry as it provides them not only with an additional source of income and personal satisfaction that advance their personal and social positions but also an avenue to help achieve gender equality and empowerment in the national development and policies of Malaysia.

**Keywords:** Women entrepreneurs, homestay industry, demographic profile, motivation, empowerment, sustainability, gender equality, Peninsular Malaysia

**Introduction**

Tourism has been identified as one of the most vibrant industries worldwide. As a sub-industry within tourism, the potential of ecotourism has been recognised to grow even further. Realising this, many countries seek to further develop this untapped industry. In Malaysia, services and products with ecotourism characteristics have the potential to grow and sustain and, at the same time, contribute further to our tourism industry. As highlighted in the Ninth Malaysia Plan (2006-2010), a growth in tourism is seen to have a positive relationship to the expansion of other sub-sectors, especially the homestay industry as well as in others that carry ecotourism-related products and services. The Malaysian government views the homestay industry as an industry that has unique Malaysian appeal and thus proactively supports the growth of this sector. Homestay industry is usually packaged with local traditions and cultural appeal as well as natural heritage. This, in return, provides visitors with a distinct opportunity to experience the rich and hospitable local culture. On the other hand, homestay industry is also recognised by the government as an industry that will increase the participation of rural population in tourism-related activities. For this reason, rural households are encouraged to seize these opportunities to
supplement and generate their household incomes as well as to be an important part of a budding industry (Intan Osman, Zainal Ariffin Ahmad, Noor Hazlina Ahmad, Sabai Khin and Azrina Husin, 2008).

Although the number of homestay operators has increased to 2,808 from 142 villages nationwide during the Ninth Malaysia Plan (2006-2010), research on the homestay industry particularly on women as homestay entrepreneurs is still in its infancy. Noting the potential contribution of the homestay industry not only to the tourism agenda of the country but also to the development of the community concerned, it is deemed timely that research on women’s choice in homestay entrepreneurship be undertaken. This will potentially address Norman and McDonald’s (2004) call for women entrepreneurs to contribute to the sustainability of the homestay business which offers a multiplier effect on the country’s economic, environmental and social aspects (Intan Osman, Zainal Ariffin Ahmad, Noor Hazlina Ahmad, Sabai Khin and Azrina Husin, 2008). Seeking factors that contribute to the sustainability of homestay business led by women is the trust of the paper.

**Homestay in Malaysia**

The Homestay Program in Malaysia was first introduced by the Ministry of Tourism in 1988 as an effort to diversify tourism products through the provision of an alternative accommodation for tourists. Officially launched in 1995 at several locations in Malaysia, homestay differs from hotel accommodation where the latter enables tourists to stay with a host family and experience the Malaysian lifestyle and traditions throughout their stay.

With the inception of the homestay program, the National Eco-Tourism Plan calls upon small villages to be involved in the ecotourism industry through homestay activities. In
Malaysia, the homestay program is an ecotourism package, offering agro-tourism, nature-tourism and/or cultural-tourism package. In 2008 the website www.homestay.motour.gov.my, listing homestay operators in Malaysia was launched to promote the homestay program amongst foreign and local tourists. Since then, there were 2,808 homestay operators from 142 villages nationwide (New Straits Times, 25 September 2008) with each state featuring its own unique homestay program. Organisations including the State Tourism Action Board, State Homestay Co-coordinator, and State Homestay Management Committee are also mandated to promote the homestay programs in their respective state. As a result, there were 27,763 homestay tourists in Malaysia with the highest number of arrivals in Southern and Central Peninsula and East Malaysia between January to Jun 2008.

Given the scenario discussed above and coupled with the fact that the homestay program is also a strategy of the Malaysian government to improve the living standard of the rural community, especially that of women, it is vital to study women’s contribution to this promising industry by identifying the factors that influence the sustainability of the homestay operations. Current study will focus on motivational, empowerment and sustainability factors affecting women’s entrepreneurial choice in the homestay industry.

**Literature Review**

One of the central questions in the field of entrepreneurship is trying to understand why some individuals engage in entrepreneurial activities while others do not (Baron, 2005). Various school of thoughts ranging traits based research to studies emphasizing cognitions are making fundamental assumption that entrepreneurship is a process enabling an individual to voluntarily engage in to pursue desired goals. Although human agency has a critical role in
entrepreneurship process, research on what motivates individuals to participate in entrepreneurial activities and the choices they make to pursue desired goals is still limited (Shane, Locke and Collins, 2003). Motivation from entrepreneurship perspectives is seen as a driving factor that mobilizes an individual to pursue the goals, and seen as an expression of a specific attitude that harbors an individual to seek accomplishment, autonomy, creativity, control and risk taking (Cromie, 2000). In addition, the importance of motivation as among the key factors for one to start a business has been cited in the literature. According to Buttner and More (1997), the motivations of entrepreneurs are correlated with the manner these entrepreneurs measure their business success. The importance of motivation which includes psychological traits as one of the key factors in starting a business is not a new phenomena in entrepreneurship literature. Entrepreneurs are said to be individuals who possess personal characteristics such as the desire to seek achievements, ability to take risk, possession of certain leadership styles; they have also undergone a process of socialisation related to business (Brockhaus & Horowitz, 1986). However, the degree to which these traits motivate entrepreneurs may vary from one society to another, as shown in studies on women entrepreneurs in Singapore (Lee, 1996) and Nigeria (Woldie & Adersua, 2004).

On the other hand, motivation also refers to “opportunity structure, an ‘objective’ structure of economic opportunity and a structure of differential advantage in the capacity of the system’s participants to perceive and act upon such opportunities” (Glade, 1967:251 as cited in Thornton, 2009). This in turn points to the social context that turns one into an entrepreneur, such as the influence and roles of markets and firms on the individuals who become entrepreneurs (Thornton, 2009), as well as displacement from previous jobs (Shapero & Sokol, 1982). The findings of the inter-country differences of the motivation to be self-employed among
entrepreneurs in Malaysia and Australia indicate that even though there were expressions of having been “pushed” into starting a business, the majority of the participants highlight the “pull motives” such as desire for autonomy and independence, a need for more flexibility in managing their life, and an interest in exploring new ideas. Interestingly, there are commonalities with respect to the motives reported by Australian and Malaysian participants (Ahmad, 2007).

Homestay is a home-based industry in which family relations as well as gender issues come to play. Loscocco and Smith-Hunter (2004) show that women who own home-based businesses face less family conflict than those who run their businesses outside the home, and because their primary priority remains their family and their roles within the family, the former may enjoy less success than their female counterparts. A study conducted on family businesses in rural China shows that men tend to run these businesses as opposed to women, thus disproving the notion that women will be at a better position to take advantage of their gender roles within the family (Entwisle et al, 1995).

Homestay industry is also seen as a “community-based ecotourism venture”, a term propagated by scholars to accentuate the benefits gained by the local community whose life, to varying degrees, is touched by tourism activities (Ceballos-Lascurain, 1996). This developmental approach to tourism is likely to empower the local community at psychological, social, political and economic levels (Scheyvens, 1999). According to Kabeer, N. (2001) empowerment is “The expansion in people’s ability to make strategic life choices in a context where this ability was previously denied to them.” (p. 19). Kabeer stresses that having resources including economic, human and social; achievement and the factor agency which is the ability to define one’s goal and to add upon them will empower women to make strategic choices in their lives. In addition, Economic gains and independence have been shown to bring about greater empowerment for
women. We are anticipating Malaysian women homestay entrepreneurs through economic and social gains will be empowered to make some changes in the conduct of homestay operations affecting to some extent gender relations at home and community. Valaoras, Pistola and Pistola (1999), found that women’s participation in ecotourism in Greece had opened up alternative doors for income generation, as well as created awareness on issues pertaining to environment conservation. On the same note, Pleno (2006) demonstrated how ecotourism projects increased the level of participation, mobilisation and socialisation among women.

According to Colbert and Kurucz (2008), business firms are placing increasing emphasis on their ongoing "sustainability”, which implies a simultaneous focus on economic, social, and environmental performance. At a high level, triple bottom line sustainability is a values-laden aspiration—it is a concept that explicitly acknowledges as important the relationship between a firm's economic performance and its performance in social and environmental terms. It is important to see how ecotourism businesses contribute to the environment and the society besides creating financial value since the main tenet of ecotourism is to minimize negative impacts on the nature and socio-cultural environment, provides economic and social benefits to local communities, and supports the protection and conservation of natural and cultural assets according to World Tourism Organization (2002). Therefore, in lieu of the ecotourism activities that homestay business operates in, this study will assess the sustainability of the homestay program from economic, social, and environmental aspects rather than financial aspect alone.

Jamil and Amran Hamzah (2007), in their local study on the role played by a women’s association to support women entrepreneurs in the homestay program in central Malaysia, found that the group provided a platform for the women involved in the homestay industry to earn extra
income and be part of the homestay community in the area. The association also empowers these women by equipping them with skills needed in the homestay industry, via training.

The importance of entrepreneurship and sustainable development is linked to the centrality of entrepreneurship in economic development, generation of growth and means for innovation and change (Lordkipanidze, M; Brezet, H; & Backman, M., 2004). In this respect, we are postulating that Malaysian women will have an increased involvement in the homestay industry if tourism continues to generate economic gains. Their strong entrepreneurial involvement in the diversification of local economic activities is needed to cope with increased demand for new types of tourism such as eco-tourism.

**Method**

The present study is part of a research project, “Women’s Participation in Sustainable Development: SME’s Entrepreneurship in Ecotourism for Value Creation Services”, a Universiti Sains Malaysia Research Universiti Grant, bearing an Account No: 1001/PKANITA/816051, that examines the participation of women homestay operators, from the perspectives of personal and organizational factors affecting their participation in the sustainable development of homestay industry. Personal factors such as motivation, and empowerment and the sustainability of the homestay operations are the focus of the research variables.

**Samples**

The sampling frame was based on the homestay directory obtained from the Ministry of Tourism, Malaysia ([http://www.homestay.matour.gov.my](http://www.homestay.matour.gov.my)). As of July 2008, there are 137 villages with 106 registered homestays comprising 2808 homestay houses. Calls were also made
to the state tourism agencies to identify homestay operators not listed in the directory. Altogether, a total of 800 operators in eleven states (central, northern, southern, and eastern regions) from Peninsular Malaysia were identified of which 483 data represented women respondents yielding a high response rate of 60.4%. The employment of enumerators to conduct face-to-face interview surveys at each chosen location contributed to the high response rate comprising 31.5% from Central, 29.8%, Northern, 24.2% Southern and 14.5% Eastern Malaysia.

**Survey Instrument**

Items reflecting “motivation” (i.e., pull and push factors) were adapted from Ahmad (2007); they comprise 20 items, out of which 13 reflects the pull factors. The remaining 7 items reflect the push factors. A 5-point Likert scale was used, allowing ratings from 1 (*very low*) to 5 (*very high*). On the other hand, “empowerment” was measured using 8 items adapted from Kabeer (2001). Participants rated each item in terms of the extent to which they agree to the statements reflecting empowerment issues including “allow to make decision on matters related to homestay”, “tend to have control over decision making on matters related to homestay” on a 5-point Likert scale, allowing ratings from 1 (*strongly disagree*) to 5 (*strongly agree*). Sustainability measures were adapted from Lordkipanidze, M; Brezet, H; & Backman, M. (2004). Respondents were asked to rate on a 5-point Likert scale items related to economy such as “a source of income to the community”, “a diversification of local economic activities.” For environmental sustainability, respondents rated on a 5-point Likert scale items including “safeguarding environmental qualities”, and “reduction of the usage of the natural resource from the environment, “allowing the ratings from 1 (*very low*) to 5 (*very high*).
Data collection procedure

Twenty-four enumerators, comprising Management and Social Sciences students from three Malaysian universities were trained prior to data collection. Each enumerator was provided with several sets of questionnaires with instruction to collect data at the selected locations and regions within Peninsular Malaysia. Prior to data collection, calls were made to each site informing the management of the homestay committee about the visit with the intention to gather data from women homestay operators as study respondents. These respondents were briefed and given a consent letter before proceeding with the interview. Enumerators were given a month to complete the data collection.

SPSS version 16 was used to analyse the descriptive data and to conduct the regression analysis. The factor analysis on motivation, empowerment and sustainability was run and the results are shown on the last three pages of the paper.

Results and Findings

Demographic Profiles of Homestay Repondent Samples

Most of the women respondents are married (83.2%), operating homestay on a part-time basis (55.3%) while one-third (44.7%) are full-time operators at the time of the research. The majority of the respondents (68.1%) are between 41 to 60 years old with 89.9% completed eleven years of schooling. Those with more than four but less than six children (47.3%) and between 1-3 of these children assist them (47.6%) in the management of homestay. Prior to their involvement in the homestay operations, 39.5% of the respondents were unemployed, 21.5% self
employed, 16.6% employed while 22.4% were homemakers. A total of 122 (25.3%) of these respondents are currently serving as homestay committee members. In terms of years of involvement, 41.2% of the respondents have been in the homestay business between 1-3 years with 65.8% registered as homestay owners.

**Motivation of the Homestay Operators**

At the outset of the study, it has been highlighted that studies investigating the participation of women homestay operators in Malaysia are rather limited. Current study hopes to address the inadequacy and identify the motivating factors that stimulate women to participate in the homestay industry.

As depicted in Table 1, it is evident that the homestay operators were motivated by the “pull factors”. The most important reasons for engaging in homestay industry are passion in this business ($M=4.14$) followed closely by personal satisfaction ($M=4.07$), and desire to pursue own interest ($M=3.90$). Having said that, other “pull factors” such as to generate more income, to prove own ability to be successful, to seize available opportunity as well as to have control over one’s own action are also significant motives for involving in this emerging industry.

Interestingly, the “push factors” comprising economic depression, unemployment, retrenchment, dissatisfaction with former job, no job security in the previous employment, frustrated with the level of income in the former job and work pressure due to downsizing, have been rated very low as the reasons to engage in homestay business. This finding suggests that they are not being “pushed” to the industry by these external forces. Rather, the prime motivation is their passion and inclination to pursue something they enjoy doing and this is probably further reflected in the high number of those who engage in this business on a part-time basis.
Table 1: Motivation of Women Homestay Operators (N=483)

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pull factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Desire to generate more income</td>
<td>3.81</td>
<td>1.17</td>
</tr>
<tr>
<td>2. Passion in this business</td>
<td>4.14</td>
<td>1.02</td>
</tr>
<tr>
<td>3. To prove own ability to be successful</td>
<td>3.34</td>
<td>1.41</td>
</tr>
<tr>
<td>4. Personal satisfaction</td>
<td>4.07</td>
<td>1.06</td>
</tr>
<tr>
<td>5. Pursue one’s own interest</td>
<td>3.90</td>
<td>1.35</td>
</tr>
<tr>
<td>6. Desire to own a business</td>
<td>2.92</td>
<td>1.56</td>
</tr>
<tr>
<td>7. Desire to have control over what one is doing</td>
<td>3.17</td>
<td>1.50</td>
</tr>
<tr>
<td>8. Desire for more flexibility in managing own time</td>
<td>3.19</td>
<td>1.46</td>
</tr>
<tr>
<td>9. See the opportunity/potential in this business</td>
<td>3.37</td>
<td>1.48</td>
</tr>
<tr>
<td>10. Inspired by friends’ and other peoples’ success</td>
<td>3.57</td>
<td>1.63</td>
</tr>
<tr>
<td>11. Encouraged by a friend</td>
<td>3.61</td>
<td>1.60</td>
</tr>
<tr>
<td>12. Desire for a balanced lifestyle</td>
<td>2.93</td>
<td>1.61</td>
</tr>
<tr>
<td>13. Desire for a balance between work and family</td>
<td>2.83</td>
<td>1.66</td>
</tr>
<tr>
<td><strong>Push factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Economic Depression</td>
<td>.70</td>
<td>1.34</td>
</tr>
<tr>
<td>15. Unemployed</td>
<td>.34</td>
<td>.96</td>
</tr>
<tr>
<td>16. Retrenched</td>
<td>.16</td>
<td>.61</td>
</tr>
<tr>
<td>17. Dissatisfaction with former job</td>
<td>.23</td>
<td>.77</td>
</tr>
<tr>
<td>18. No job security in the previous employment</td>
<td>.22</td>
<td>.72</td>
</tr>
<tr>
<td>19. Frustrated with the level of income in the former job</td>
<td>.23</td>
<td>.75</td>
</tr>
<tr>
<td>20. Work pressure due to downsizing</td>
<td>.17</td>
<td>.63</td>
</tr>
</tbody>
</table>

Empowerment of Homestay Operators

Empowerment enables women to have a sense of pride and awareness of the importance of their control over their own development (Wearing & Larsen, 1996). As depicted in Table 2, most of the homestay operators have rated the sense of empowerment to be above 3.00, indicating that they experience a moderate to high level of empowerment, especially in accessing
training and education services ($M=4.10$), the ability to make decision on matters related to homestay business ($M=3.72$), the ability to have control over decision making on matters related to homestay ($M=3.54$), as well as the ability to access resources and information required for homestay activities.

**Table 2: Empowerment of Women Homestay Operators ($N=483$)**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am allowed to make decision on matters related to homestay.</td>
<td>3.72</td>
<td>1.24</td>
</tr>
<tr>
<td>2. I tend to have control over decision making on matters related to homestay</td>
<td>3.54</td>
<td>1.31</td>
</tr>
<tr>
<td>3. I normally get involved in decision making process at community level on matters related to homestay.</td>
<td>2.98</td>
<td>1.54</td>
</tr>
<tr>
<td>4. My voice seems to matter in decision making process at community level on matters related to homestay.</td>
<td>3.07</td>
<td>1.48</td>
</tr>
<tr>
<td>5. I tend to have access to training or education services.</td>
<td>4.10</td>
<td>1.20</td>
</tr>
<tr>
<td>6. I tend to have access to resources and information required for homestay.</td>
<td>3.32</td>
<td>1.31</td>
</tr>
<tr>
<td>7. I normally need permission from the head of the household to decide on matters related to homestay.</td>
<td>3.25</td>
<td>1.78</td>
</tr>
<tr>
<td>8. I normally consult head of the household on matters related to homestay.</td>
<td>3.27</td>
<td>1.79</td>
</tr>
</tbody>
</table>

In terms of sustainability as shown in Table 3, homestay operations generate highly on economic sustainability including turning local into entrepreneurs ($M=3.64$), followed by a source of income to the community ($M=3.56$), a source of employment to the community ($M=3.56$), a diversification of local economic activities ($M=3.33$) and new market potential ($M=3.33$). For social sustainability, strengthening the local culture and identity ($M=3.98$) seems to be the highest contributor to homestay operators, followed by increasing awareness of value of heritage and need for protection ($M=3.73$), improvement in quality of life ($M=3.71$), and keeping population locally less migration ($M=3.67$). The results on environmental sustainability
reduction of waste materials ($M=3.41$), safeguarding environmental qualities ($M=3.27$), less environmental impact ($M=3.13$) and reduction of the usage of the natural resource from the environment ($M=3.02$) are moderate compared to the other two sustainability factors.

**Table 3: Sustainability of the Homestay Operations ($N=483$)**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECONOMY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. A source of income to the community</td>
<td>3.56</td>
<td>1.48</td>
</tr>
<tr>
<td>2. A diversification of local economic activities</td>
<td>3.33</td>
<td>1.39</td>
</tr>
<tr>
<td>3. A source of employment to the community</td>
<td>3.56</td>
<td>1.35</td>
</tr>
<tr>
<td>4. Turning local into entrepreneurs</td>
<td>3.64</td>
<td>1.35</td>
</tr>
<tr>
<td>5. New market potential</td>
<td>3.33</td>
<td>1.41</td>
</tr>
<tr>
<td><strong>SOCIAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Strengthening the local culture and identity</td>
<td>3.98</td>
<td>.91</td>
</tr>
<tr>
<td>2. Improved knowledge in language, culture, environment, and business</td>
<td>2.35</td>
<td>1.58</td>
</tr>
<tr>
<td>3. Increased awareness of value of heritage and need for protection</td>
<td>3.73</td>
<td>1.11</td>
</tr>
<tr>
<td>4. Improvement in quality of life</td>
<td>3.71</td>
<td>1.07</td>
</tr>
<tr>
<td>5. Keeping population locally (less migration)</td>
<td>3.67</td>
<td>1.19</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL</strong></td>
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<tr>
<td>1. Safeguarding environmental qualities</td>
<td>3.27</td>
<td>1.38</td>
</tr>
<tr>
<td>2. Reduction of the usage of the natural resource from the environment</td>
<td>3.02</td>
<td>1.39</td>
</tr>
<tr>
<td>3. Less environmental impact</td>
<td>3.13</td>
<td>1.32</td>
</tr>
<tr>
<td>4. Reduction of waste materials</td>
<td>3.41</td>
<td>1.32</td>
</tr>
<tr>
<td>5. Replanting initiatives</td>
<td>2.81</td>
<td>1.79</td>
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**Table 4. Regression Analysis: Motivation, Empowerment and Economic Sustainability.**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent Variable Sustain Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation (Pull Factors)</td>
<td>.000</td>
</tr>
<tr>
<td>Empowerment</td>
<td>.022</td>
</tr>
<tr>
<td>F value</td>
<td>33.075</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.501</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.485</td>
</tr>
</tbody>
</table>
*p<0.05, **p<0.01

From Table 4, the R² value is 0.501, suggesting that 50.1 percent variation in the dependant variables. In this research, economic sustainability can be explained by variation in two independent variables. In other words, nearly most changes in economic sustainability is influenced by the significance of both pull factors (motivation) and empowerment.

**Table 5.** Regression Analysis: Motivation, Empowerment and Social Sustainability.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent Variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sustain Social</td>
<td></td>
</tr>
<tr>
<td>Motivation (Push Factors)</td>
<td></td>
<td>.065</td>
</tr>
<tr>
<td>Motivation (Pull Factors)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>F value</strong></td>
<td></td>
<td>25.253</td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td></td>
<td>0.433</td>
</tr>
<tr>
<td><strong>Adjusted R²</strong></td>
<td></td>
<td>0.416</td>
</tr>
</tbody>
</table>

* *p<0.05, **p<0.01

The R² value as in Table 5, is 0.433, suggesting that 43.3 percent variation in the dependant variables. In this research, social sustainability can be explained by variation in both independent variables. In other words, nearly most changes in social sustainability is influenced by the significant of the pull and push factors (motivation).

**Table 6.** Regression Analysis: Motivation, Empowerment and Environmental Sustainability.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent Variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sustain Environment</td>
<td></td>
</tr>
<tr>
<td>Motivation (Push Factors)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>F value</strong></td>
<td></td>
<td>12.634</td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td></td>
<td>0.526</td>
</tr>
<tr>
<td><strong>Adjusted R²</strong></td>
<td></td>
<td>0.276</td>
</tr>
</tbody>
</table>
The R² value as in Table 6, is 0.526, suggesting that 52.6 percent variation in the 
dependant variable. In this study, sustainability environment can be explained by variation in one 
independent variable. In other words, nearly most changes in economic sustainability are 
influenced the significance of motivation push factors.

**Discussions**

This study shows that majority of the homestay operators are owners of but operate their 
respective homestay business on a part-time basis thus the penchant to participate in the industry 
is more towards “life-style” entrepreneurship. Their choice in homestay entrepreneurship is 
motivated by personal satisfaction besides having passion in the business.

Having the range of age between 41 to 60 years old indicates that these women are driven 
by the energy and passion and personal satisfaction to pursue an interest in operating the 
business. Clearly, the social factor contributes to the motivational pull factors, as operators 
started their homestay operations after receiving inspiration and encouragement from friends 
who are themselves already successful in the homestay operation. Homestay entrepreneurship is 
made possible due to the close-knit nature of the Malaysian culture that emphasises community 
support and cooperation whilst homestay activities are normally organised as community-based 
activities.

As for the “push factors”, external factors including being retrenched, work pressure due 
to downsizing and no job security in the previous employment are not the reasons for the 
respondents to operate a homestay. Instead, these women chose homestay entrepreneurship out
of the desire to change their position in the society and at home. Despite of not attaining tertiary education and rather new in the homestay business, they are highly empowered to gain access to training or education services \((M=4.10)\) and make decisions on matters pertaining to homestay operations \((M=3.72)\). We can postulate that these women entrepreneurs are empowered to build their capacity in terms of enhancing human capital to sustain their business, despite running it on a part-time basis.

To these women, managing a homestay business offers a sense of psychological empowerment that could boost one’s self-esteem, allowing them to expand their horizon and break the status quo from being traditionally passive to active players in the community. Having control over decision making and exposure to education and training creates an enabling condition to advance at personal and organizational levels. It is also interesting to note the sustainability of homestay business seems to anchor highly on economic followed by social and the environment. This suggests that homestay entrepreneurship can be sustained through a diversification of local economic activities and new market potential (tapping new market).

Additionally, motivation and empowerment of women entrepreneurs in current study are significantly related to both economic, social sustainability and to a lesser extent on environmental sustainability supporting the notion that economic development in any country creates an opportunity for entrepreneurship to provide sustainable economic growth. As depicted in Table 6, the passion in business, the desire to generate more income and to pursue their own interests amongst these homestay entrepreneurs influence significantly on how they measure economic sustainability (sig. at 0.00 where **\(p<0.01\)). Similarly, the degree of empowerment women experience has a significant impact on economic sustainability (sig. at 0.022 where \(*p<0.05\)).
The social benefits viewed by women homestay entrepreneurs is significantly influenced by women’s pull and push motivation factors. As shown in Table 7, the pull factors, significant at 0.00 where **p<0.01 whilst the push factors at 0.07 where *p<0.05 greatly influence the strengthening of the local culture and identity as well as improving their knowledge, culture, environment and business. From environmental sustainability perspective, women are driven by economic depression, dissatisfaction with former job which tend to influence significantly on environmental sustainability, significant at 0.00 where **p<0.01.

**Conclusion**

Generally, this study provides useful insights and understanding on Malaysian women operating homestay business within the Malaysian context and culture. Women in this study and majority of whom are in the forties and fifties are significantly associated with motivational pull factors, empowerment and sustainability. Their entry into homestay entrepreneurship is highly motivated by personal satisfaction, passion in the business, and encouragement from friends. We postulate that they are characterized by the desire to seek achievements, take some risk, and display certain leadership styles gained from a socialisation process related to homestay business (Brockhaus & Horowitz, 1986).

In addition, having the opportunity to run the homestay business seems to create an enabling condition for them to make decisions and gain access to training pertaining to homestay operations. We could infer that they believe in the importance and relevance of skills and knowledge in homestay management and operations. To these women, managing homestay business offers them a sense of psychological empowerment that could boost their own self-esteem, allowing them to expand their horizon and break the status quo from being traditionally
passive to active players in the community. The sustainability of homestay business seems to anchor highly on economic followed by social and the environment inferring that homestay entrepreneurship can be sustained through a diversification of local economic activities and new market potential.

The fact that motivation and empowerment of these women entrepreneurs are significantly related to both economic and social sustainability shows that women homestay entrepreneurs are more likely to grow in and potentialise the tourism sector which is a fast growing industry in the Malaysian economy. Stimulating and promoting entrepreneurship for tourism development amongst Malaysian homestay entrepreneurs will help generate growth and serve as a vehicle for innovation and change in the tourism sector (Lordkipanidze, Brezet and Backman, 2004). Tourism creates economic development with an opportunity to provide sustainable economic growth. The social benefits of homestay business viewed by women entrepreneurs are significantly influenced by pull and push motivation factors suggesting that these women operators become entrepreneurs due to community-based activities through tourism markets (Thornton, 2009). There seems to be a significant association of motivational push factors with environmental sustainability amongst women in this study. To some extent, the push factors are more likely to push women into homestay entrepreneurship as enabling conditions to generate income and improve living conditions as most of these women are previously homemakers and unemployed.

In a sense, this study offers researchers some new dimensions of rural entrepreneurship amongst women who participate in the homestay industry. It adds fresh insights into the perspectives of motivation, empowerment and sustainability amongst Malaysian women as homestay entrepreneurs as well as advancing the concepts of ethnic and rural entrepreneurship in
the literature. In practical terms, it offers policy makers an informed knowledge on the reasons women participated in homestay industry. Policy developments could address the structures and programs that enable women to choose homestay entrepreneurship thus mobilizing some of the policy thrusts for women and development in the Ninth Malaysia Plan (2006-2010). Malaysia has made significant move towards achieving gender equality and women’s empowerment noting from the sharp declining of gender inequality from 1980 (0.340) to 2004 (0.243) and successive Malaysian development plans that placed greater emphasis on mainstreaming women in national development through affirmative multi-sectorial policies and programmes. By playing a variety of roles at the family, community and society levels, women have been able to contribute to national development and prosperity (United Nations Development Programme, Malaysia, 2008). Women who are owners and managers of the emerging subsector (ecotourism) are important human capital and key resources in advancing informal sectors in the Malaysian economy. Women’s motivation and empowerment in sustaining rural entrepreneurship in the homestay business could innovatively fill the entrepreneurship gap which tourism sector has created.

REFERENCES


Intan Osman, Zainal Ariffin Ahmad, Noor Hazlina Ahmad, Sabai Khin and Azrina Husin (2008). “Participation of Women Entrepreneurs in Ecotourism Industry: A Proposed Model,” In RARC


Ninth Malaysia Plan 2006-2010, Economic Planning Unit, Prime Minister’s Department, Putrajaya, 2006.


**FACTOR ANALYSIS FOR MOTIVATION**

<table>
<thead>
<tr>
<th>KMO and Bartlett's Test</th>
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<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
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<tr>
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## Rotated Component Matrix\(^a\)

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Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.
FACTOR ANALYSIS FOR EMPOWERMENT

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .586 |
| Bartlett's Test of Sphericity | Approx. Chi-Square |
| df | 15.000 |
| Sig. | .000 |

Rotated Component Matrix

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Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.
**FACTOR ANALYSIS FOR SUSTAINABILITY**

### KMO and Bartlett's Test

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### Rotated Component Matrix

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Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.
The difficulty associated with determining what constitutes immigrant entrepreneurial behaviour lies in the road being travelled differently by immigrants from dissimilar backgrounds, value systems, and cultural heritages. This paper outlines the findings of a case study analysis which presents the entrepreneurial characteristics of Indian migrants operating SMEs in New Zealand, with respect to specific migration, settlement, cultural and business factors. The case study approach used triangulation (semi-structured interviews with Indian immigrant entrepreneurs; selected immigration literature, and interviews with New Zealand based Indian community leaders) to draw conclusions on the unique entrepreneurial activity for SME owners within the Indian community of New Zealand.
Introduction

India is one of the world’s rapidly growing regions, with expanding markets for goods and services. In terms of New Zealand there are benefits for present and future generations in strengthening of links with India in regard to trade and skill migration. Historically migration from India has long been a strong connector between the two countries. Indian migrants to New Zealand are the third largest minority group with a population of 103,059 New Zealand residents as at the 2006 census, which is surpassed only by Pacific Peoples (265,974 residents) and Chinese (139,727 residents). This is in the context of a New Zealand society of 4 million people of which European (2,609,589 residents) and Maori (565,326 residents) are the dominating cultures (Statistics New Zealand, 2006). This history of Indian migration spans over 100 years and the cultural and business impact of the Indian community is felt throughout New Zealand society. While holding true to their religious and cultural values Indian immigrants also strive to integrate into New Zealand society. A major element of their social and economic adjustment to life in New Zealand is tied to the status attained through some form of employment - which impacts on their family viability, social acceptance and personal esteem. One approach to satisfying this need is to engage in entrepreneurial activity. A major conclusion of the international literature on ethnic minorities is that entrepreneurial activity is a promising springboard for immigrants’ social integration, reinforcing their economic position and social status (for example, Hunter, 2007; Masurel, Nijkamp and Vindigni, 2004). Furthermore, in many migrant receiving countries the level of immigrant entrepreneurship has trebled in the last two decades (Rath and Kloosterman, 2003). In fact, researchers have concluded that over the last 100 years immigrants had been more likely to be self-employed than their native born counterparts (Fernandez and Kim, 1998, p. 654). This trend towards high levels of immigrant entrepreneurial activity is not so pronounced among
the Indian population in New Zealand, Those who have chosen the self-employment option constitute 17.6 percent of the Indian ethnic group, whereas 20.3 percent of European migrants and 18 percent of the total resident population are involved in some form of self-employment (Statistics New Zealand, 2006).

In order to better understand the entrepreneurial patterns of the Indian New Zealanders, this paper explores their entrepreneurial behaviour in the context of the broader New Zealand society. Gaining an understanding of such behaviour is challenging as the drivers and limiters that affect an ethnic minority’s entrepreneurial choices are often dynamic and complex. Furthermore, patterns of behaviour and decision-making may be unique to specific ethnic groups. As Krueger and Brazeal have observed, “entrepreneurial activity does not occur in a vacuum. Instead it is deeply embedded in a cultural and social context, often amid a web of human networks that are both social and economic” (1994, p. 230). The overall aim of this research was to provide an insight into the specific case of the Indian Peoples of New Zealand by reporting on narratives from Indian immigrants or their immediate offspring who have been engaging in entrepreneurial behaviour in New Zealand, and referred to in this paper as immigrant entrepreneurs.

**Methodology**

This paper draws from a larger qualitative study (de Vries, 2008) that involved the development of an Immigrant Entrepreneurship Model through an inductive process utilising grounded theory. The original study was based on 42 semi-structured interviews and 35 subsequent follow-up interviews with immigrant entrepreneurs who owned small and medium-sized enterprises (SMEs) in New Zealand, undertaken over an eighteen months period within four heterogeneous ethnic groups (Chinese, Dutch, Indian, and Pacific Peoples) in New Zealand. In the context of this study immigrant entrepreneurship has been defined as:
immigrants or their immediate offspring, who have a specific ethnic identity, and who create work place settings for themselves and others, within their receiving country. Whilst the term immigrant implies ‘migrating peoples’ it is noted that the definition has been extended to include New Zealand-born second generation for a number of reasons. Firstly because of the grounded theory approach of theoretical sampling (in the development of the Immigrant Entrepreneurship Model) drew on second generation entrepreneurs. Secondly the extended definition takes into account the ‘immigrant factor’ and cultural influence that are often very strong across generations within ethnic minority groups, and impacts on the entrepreneurial behaviours of their community (for example, Butterfield, 2004; Dhaliwal and Kangins, 2006; Peters, 2002). Thirdly, it gives a stronger longitudinal perspective of immigrant adaptation and their entrepreneurial participation in New Zealand.

The data was coded and indexed using thematic analysis, and NVivo data analysis software was used as a coding, retrieval, and analysis tool during the theoretical development stage. The model’s framework stressed four main constructs:

- The migration profile - which identified homeland characteristics of the immigrant entrepreneurs or their families, and their migration drivers.
- The settlement profile - which identified the influence of societal fit and social perceptions as they impacted on the immigrant entrepreneurs’ business activity.
- The cultural profile – which identified personal, family, and cultural influences, and their impact on the immigrant entrepreneurs’ business activity.
- The business profile – which identified the catalysts for entrepreneurial activity, the business drivers, human and financial capital capability, and the business philosophies of the Immigrant entrepreneurs.
This paper attempts to apply the model to bring further understanding to the specific topic of Indian immigrants engaged in entrepreneurship in New Zealand (see Figure 1). The case study reported here focuses on the nature of the entrepreneurial activity of the Indian community in New Zealand, and is based on triangulated research undertaken through: (1) ten face-to-face or telephone interviews with Indian immigrant entrepreneurs, and seven subsequent follow-up interviews within this cohort; (2) two face-to-face interviews with community members who could comment from a Indian community perspective: one a senior member of a major research institution and the second the editor of a Indian community newspaper; (3) and finally a consideration of the relevant immigration and ethnic literature (Apitzsch, 2004; Basu, 1998; Benson-Rea & Rawlinson, 2003; Collins, 2003; Dana & Dana, 2003; Duncan, Bollard & Yeabsley, 1997; Dunstan, Boyd & Crichton, 2004; Elliott and Gray, 2000; Hiebert, 2003; Janes, 2006; McLeod, 1980; Mace, Atkin, Fletcher & Carr., 2005; Min & Bozorgmehr, 2003; Palakshappa, 1980; Salt, 1992; Scott, 2007; Shepard, 1980; Steeds, 2006; Tiwari, 1980; Whybrow, 2005; Wilson, 1980; Xiang, 2001; Zodgekar, 1980).
Findings

The case study evidence is presented in a format based on the immigrant entrepreneurship model presented in Figure 1. The findings illustrate the unique dimensions of the four constructs - migration profile, settlement profile, cultural profile and business profile which evolved during the case analysis of the Indian immigrant entrepreneurs.

1. Migration

   Homeland: Indian immigrant entrepreneurs came from geographically dispersed origins with distinct cultural, religious and values systems. They were predominantly from an urban middle socio-economic background, reflected on happy childhoods, and identified religious beliefs as fundamental to their homeland way of life. They spoke of a broad spectrum of blue or white collar employment among their immediate families, and entrepreneurial activity in their extended families. Generally they migrated with the intention of becoming employees, and developed into entrepreneurs after being employed in New Zealand for some time.

   Drivers: The overwhelming driver was to improve their quality of life. This was expressed through a stated desire for better careers and educational opportunities, for themselves and especially their children. The push factor of homeland dissatisfaction (for example, political or racial dilemmas) was often stated as influencing the decision to migrate, while more recent arriving Indian immigrant entrepreneurs referred to the attractiveness of New Zealand (pull factor) as triggering their migration.

   Immigration: Predominantly, Indian immigrant entrepreneurs migrated as family units, and with varying levels of financial resources or knowledge about New Zealand. They spoke of the difficulties in gaining residency in New Zealand, but displayed fortitude in battling the immigration system to establishment themselves and their families in this country.
2 Settlement

*New Zealand arrival and societal fit:* Indian immigrant entrepreneurs settled in New Zealand cities, where they sought immediate employment. They spoke of having difficulty getting ‘the right’ job, but generally integrated into the New Zealand workforce effectively. Indian immigrant entrepreneurs reflected on the physical and cultural differences between themselves and New Zealanders, which resulted in the categorising of the Indian community in New Zealand as different, but generally their adaptable and flexible nature allowed them to overcome difficulties and many forms of discrimination. Although the Indian community congregated in cities, they did not live in enclaves. Therefore, Indian immigrant entrepreneurs lived throughout the New Zealand community. They were generally fluent in English and adapted well to New Zealand conditions, while still retaining their Indian traditions and values such as food, religion and a belief in non-violence.

*Societal perspectives:* Indian immigrant entrepreneurs felt New Zealand was a good society to live in, and that New Zealanders were pleasant but somewhat insular people. They generally appreciated the natural environment New Zealand had to offer. They believed that they brought diversity and harmony to the New Zealand way of life.

*Business integration:* The Indian level of entrepreneurial activity was less than the New Zealand average and this was often explained away as Indian migrants’ predisposition to employment and their low need for independence. Indian immigrant entrepreneurs found it relatively easy to enter business in New Zealand. However, they had concerns about the small nature and isolation of the New Zealand market, and were frustrated by regulation and compliance costs. But overall they adjusted well to these challenges.
3 Culture

*Personal:* The Indian immigrant entrepreneurs’ mindset was strongly influenced by their faith and spirituality and by the diversity of its expression. They displayed a strong internal locus of control and generally felt in control of their lives. They were goal setters, were determined to succeed, and had confidence in their own business ability. Indian immigrant entrepreneurs worked long hours and this was considered typical of the Indian character, in that they were accepting of the need to work long hours as there was generally no work-life balance in the Indian context.

*Family:* A sense of family obligation was prominent among Indian immigrant entrepreneurs with respect to immediate family, but less so toward extended family. Bloodline was still considered important, as attested by a number of arranged marriages. The traditional Indian patriarchal model, however, appeared to be softening in New Zealand. Indian immigrant entrepreneurs had strong family involvement in their business activities as an informal source of labour, although there were conflicting views on the preference for succession. Generally Indian immigrant entrepreneurs guided their children into higher education, and into the development of independent lives and professional careers. They also referred to the importance of the parental values transfer, with respect to those values which were passed on by their parents and those they passed on to their children.

*Ethnic community:* The Indian community in New Zealand is divided in many ways, including: language, tradition, region of origin, and religion. Due to this lack of a unified community, Indian immigrant entrepreneurs tended to focus on sub-community relationships and broader New Zealand business affiliations. They did, however, support the diverse Indian community through employment. Indian immigrant entrepreneurs believed that the Indian community had identifiable characteristics of: strong spirituality – for example the law of Karma, being good workers, and conducting themselves discreetly in the broader New
Zealand community. They also felt that the Indian value system and their flexibility and adaptability were beneficial to business activity. Indian immigrant entrepreneurs were New Zealand citizens, but integration was incomplete as they attempted to live in both worlds; that is, adapting to their new home while still retaining traditional customs and language.

*Homeland:* Indian immigrant entrepreneurs had strong personal homeland connections, and therefore visited their homeland regularly. Distance was, however, considered to be a significant barrier for some immigrants. There were only a few examples of homeland business connections, as New Zealanders’ hesitance to utilise immigrants and their contacts was noted by Indian immigrant entrepreneurs as a restricting factor in developing overseas markets.

4. **Business**

*Characteristics and philosophies:* Generally it was unwise to pigeon-hole Indians immigrant entrepreneurs into stereotypical businesses, although there was a dominance of service businesses in the case analysis. The Indians immigrant entrepreneurs’ start-ups were evenly split between new ventures and the buying of established businesses, with all the businesses focused on managed growth. The majority of Indian immigrant entrepreneurs stated that their businesses had a general New Zealand market focus, and were involved with only limited international activity. Philosophically, Indian immigrant entrepreneurs’ business values were based on karma, quality, customer focus and word-of-mouth marketing. They also made reference to the need for honesty, integrity, and fairness in business.

*Drivers:* Business drivers included financial security, as opposed to excessive wealth, and the aspiration to ‘be someone.’ To Indian immigrant entrepreneurs, retaining a good business reputation outstripped other considerations such as lifestyle. However, they did confirm the desire to take control of their lives and to be rewarded for their efforts. They were driven by a
quest to take advantage of their own skills and seize opportunities, rather than be frustrated with the New Zealand labour market. As such there was little evidence of forced entrepreneurship, but employment dissatisfaction had influenced the Indian immigrant entrepreneurs’ decision making.

**Learning:** Indian immigrant entrepreneurs were well qualified, having higher formal education levels than the general Indian community or the overall New Zealand population. Education appeared to enhance their entrepreneurial capability, as did their practical experience. Most had significant industry experience prior to going into business, and considered ‘learning on the job’ as vital to their success. Indian immigrant entrepreneurs took the initiative to seek out knowledge when required, but they were reluctant to depend on business professionals to help run their businesses. They preferred to talk to and seek advice from their trusted peers. They were also inspired by role models, from family members to national figures such as Mahatma Gandhi.

**Finance:** Financial responsibility and frugality was considered part of Indian immigrant entrepreneurs overall lifestyle and belief system. Indian immigrant entrepreneurs did have some difficulties with raising institutional capital and, therefore, financing mainly occurred in the context of their family and community. Family capital was the cornerstone of many of the business start-ups. Often Indian immigrant entrepreneurs managed their way through cash-flow problems with their propensity for a parsimonious lifestyle and the working of very long hours.

**Conclusion**

The Indian community are highly visible across a broad range of industries within the SME sector in New Zealand, although they are not as prominent in business as many other ethnic minorities. In an attempt to understand some of the complexities of Indian
entrepreneurship, this paper offered a profile of Indian immigrant entrepreneurship in the belief that greater understanding will enhance entrepreneurial activity. To this end the following conclusions are drawn.

Indian immigrant entrepreneurs came from geographically dispersed origins. They were predominantly from an urban middle socio-economic background. They migrated as employees and developed into entrepreneurs after arrival. They came from a cultural tradition of migration and sought an improved quality of life. They generally settled in cities and had a predisposition for employment, but spoke of having difficulty getting ‘the right’ job which drew them toward self-employment. Other reasons for going into business included financial security, reputation and aspirations to ‘be someone’. Furthermore, Indian immigrant entrepreneurs had a desire for autonomy and to be rewarded for their efforts. They were driven by a desire to take advantage of their own skills and seize opportunities.

Indian immigrant entrepreneurs were well qualified, having high education levels and practical work experience. Most had significant industry background prior to going into business and considered this experience as critical to their success. Furthermore, they took the initiative to seek out knowledge when required - mainly from their peers as opposed to professionals. Due to the lack of a unified Indian community, Indian immigrant entrepreneurs were independent and had a national business focused. They did have some difficulties with financing their businesses, and that raising capital mainly occurred in the family and community context, with family capital still being the cornerstone of business start-ups.

Spirituality was intertwined in Indian immigrant entrepreneurs’ everyday living and being. They had strong work ethics but no real work/life balance. Obligation to immediate family was a prominent feature. They had strong family involvement in their business activities, although there was no clear pattern of succession as they encouraged their children to become educated and independent. Financial responsibility and frugality was also considered part of
their overall lifestyle and belief system. Physical and cultural differences had resulted in labelling in New Zealand society but generally their adaptable nature and fluency in English allowed Indian immigrant entrepreneurs to overcome difficulties or discrimination – while still retaining their Indian traditions and values.

References


AN EMPIRICAL STUDY OF THE ROLE OF MOTIVATION AND GOVERNMENT SUPPORT AMONG SELF-EMPLOYED WOMEN IN GHANA’S TOURISM INDUSTRY

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Introduction

The crucial role of entrepreneurship as the engine of growth for economies can no longer be ignored. This is underscored by the shift from large state-owned corporations to small/medium private-owned enterprises (Galloway, Anderson, Brown & Wilson, 2005; Coyle & Leeson, 2004; Hisrich & Ozturk, 1999). The contributions of women towards this phenomenon has been significant (Verhuel & Thurik, 2001). In Ghana, as in most African countries, although entrepreneurship is still evolving, its potential to contribute to general socio-economic growth and the improvement of the socio-economic status of women in particular, is recognised (Abor & Biekpe, 2006; Tshikuku, 2001; NEPAD Document, 2001).

Providing opportunities for women in Africa (including Ghana) to earn decent income is one sure way to the successful realization of the 3rd UN Millennium Development Goal of promoting gender equality and women empowerment (REF). Promotion of female entrepreneurship has therefore become critical and tourism has been identified as a sector that offers women opportunities to earn income as was reflected in the theme for the World Tourism Day 2007 which was “Tourism Opens Doors for Women” (UNWTO, 2007). In Ghana, women constitute 65% of the employees in the tourism industry (Ghana.mvmtravel.com/newdetail.asp, 2008), thereby making the industry a major contributor in creating self-employment opportunities for Ghanaian women.

Given that women entrepreneurship has become an indispensable tool for socio-economic
development of Ghana as the nation strives to achieve middle income status, and the fact that tourism has been identified as one industry which can provide self-employment opportunities for women, it follows then that a systematic study of the women who currently own businesses in that sector will be useful in enhancing efforts at reaping the full benefits of the sector for socio-economic advancement of women in particular, and society as a whole.

Admittedly many studies have examined women’s motivations for self-employment (Aidis et al, 2006; Gundry and Yoseph-Harold, 2004; Carter, Brush, Greene, Gatewood, & Hart, 2003; Bennet & Dann, 2000; Orhan & Scott, 2001; Lerner, Brush & Hisrich, 1997). Unfortunately, most of these studies have been carried out in the context of developed and advanced countries and as such, the resultant theories and findings may not be totally applicable to females in a developing country like Ghana, due to contextual factors (Bruton, et al, 2008; Lerner, Brush and Hisrich, 1997). Furthermore, it appears that little is known about the extent to which other environmental and situational factors (such as government support) can influence the entrepreneurship phenomenon in general (Gartner, 1985). This study addresses this gap by examining the relationship between motivation and government support in a developing country.

In Ghana, few systematic inquiries have been carried out on female entrepreneurship (see Saffu, Apori, Elijah-Mensah & Adote (2008); Saffu, Apori & Elijah-Mensah, (2007); Saffu, Apori, Elijah-Mensah & Ahumatah (2006); Saffu & Manu (2004), Quainoo (2001), Cecelski (2000) and Chalfin (2000). Apparently, most of these studies have focused on the manufacturing and retail sectors of the Ghanaian economy, with little attention given to the service industry. This study is therefore an attempt to help address the dearth of information on Ghana’s tourism industry as well as the women entrepreneurs therein.
**Significance of Tourism**

Tourism has emerged as one of the world’s largest industries with many small and open economies relying heavily on it as a source of foreign direct exchange (Drakos & Kutan, 2003). Also, tourism is a potential stimulus for the economies of many resource-poor countries (Brown, Turner, Haneed, & Bateman, 2002). Tourism is one sector which offers brighter prospects for women in particular. This was amply reflected in the theme of the World Tourism Day – 2007, which was “Tourism Opens Doors for Women”. The penchant of women in Ghana for this industry is attributable to their traditional upbringing through which they acquire skills for cooking and catering for guests (Bour, 2007; Dolphyne, 2000; Brown, 1994). Undoubtedly, these skills are needed for running a tourism business.

**Prior Studies**

**Entrepreneurial Motivations**

Motivation is crucial to any entrepreneurial process (Shane, et al, 2003). Entrepreneurial motivations are goals business owners seek to achieve through the businesses they establish (Robichaud, et al, 2001). Entrepreneurial motivations include achievement, opportunity, job satisfaction, economic necessity, power, status/prestige, independence, personal development, economic necessity and welfare considerations (Lerner, Brush & Hisrich1997; Buttner & Moore 1997; Gatewood et al, 1995; Birley & Westhead 1994; Hisrich & Brush, 1986).

According to Carter et al; (2003), entrepreneurial motivations include innovation, independence, recognition, roles, financial success and self-realisation. Mitchell (2004) also cites the need for independence, material motives, the need to contribute to family security and the need to make a difference in the business and achievement. Studying entrepreneurs in
Vietnam, a typical emerging economy, Benzing, Chu & Callanan (2004) report that the desire “to be my own boss”, the desire “to increase my income” and the desire “to create a job for myself” are very significant motivation factors. Similarly, Chu, Benzing & McGee (2006) in a study of Kenyan and Ghanaian entrepreneurs, also identified the desire “create a job for my self” and the desire “to increase my income” as the two strongest motivations.

**Gender and Entrepreneurial Motivations**

The literature presents mixed findings on the impact of gender on entrepreneurial motivation. For instance, there is evidence to suggest that men and women offer similar reasons for self-employment such as, the desire for independence, the desire to make money and challenge (Bennet & Dann, 2000; Fagenson, 1993). There is also considerable support for gender differences in entrepreneurial motivation as established by Cater et al (2003), Bennet & Dann, (2000); and Gatewood et al (1995). Cater et al (2003) for instance, argue that significant differences exist between the way men and women rate the various motivation factors. Rani & Rao (2008) in their review of some empirical studies mostly from India, also concluded that women are motivated to go into self-employment by the desire to be self-employed, establish oneself in the family and in the society, as well as the desire to achieve a goal.

**Classification of Entrepreneurial Motivations**

Entrepreneurial motivations can be classified as “pull” or “push” factors (Moult & Anderson, 2005; Buttner & Moore, 1997). The “push” factors which are also known as necessity factors include job dissatisfaction, redundancy, the need to balance work and family roles and the need for more income (Moult & Anderson, 2005). The “pull” factors on the other hand attract the individual into entrepreneurial behaviour and include the need for achievement, independence, wealth and status (Moult & Anderson, 2005).
Gatewood et al (1995) argue that the “pull” factors are more important to women than the “push” factors, the opposite being true for men. Buttner & Moore (1997) and Orhan & Scott (2001) also argue that the “pull” factors influence the men more than the women.

**Government Support**

Support for small to medium scale enterprises is a central plank of the economic policy of most governments (Bennet, Robson & Bratton, 2001). Given the critical role small businesses play in socio-economic development of nations, the World Bank has over the years invested colossal sums of money (channeled mostly through the various governments) to promote the development of such ventures (Sarder, Ghosh & Rosa, 1997).

Government support has significant influence on private enterprises (Rani & Rao, 2008; Tambunan, 2007). The support could be direct or indirect. Direct government support may include provision of finance and business development services such as marketing advice to small businesses and also training at the enterprise level (Tambunan, 2007; Geeta & Syed, 2003). There are also the indirect interventions such as establishing policies and a legal and conducive environment for private business development. (Tambunan, 2007; Geeta & Syed, 2003). Assistance from governments is particularly critical for the success of firms set up by women entrepreneurs (Rani & Rao, 2008; Mayasami & Goby, 1999).

Unfortunately, there appears to be a dearth of information on which form of support is appropriate for women operating tourism businesses in Ghana. Previous research findings from developed countries have however established that women, as compared to men, face many difficulties in their attempts to secure funding to start and grow their business and this was a prime area of concern to them (Marlow, 2005; Constantinidis et al, 2006; Buttner & Moore, 2001). Women found small businesses in traditional sectors of retailing and services, such as tourism. Studies suggest that women prefer to gradually grow their ventures and therefore find the loans from banks unattractive due to the high interest rate which could be higher at times than the project itself. What such women need is micro-credits with low and manageable interest rates and terms of repayment (Constantinidis et al, 2006).

In Ghana for example, the government has established the Venture Capital Trust Fund
(VCTF) to support the entrepreneurs (VCTF Annual Report, 2007). The first function of the VCTF is to provide credit and equity financing to venture capital financing companies for the support of small and medium size enterprises. The other function is to provide money to support other activities and programmes aimed at the development and promotion of venture capital funding in the country. (VCTF Annual Report, 2007). The Venture Capital Trust fund, has earmarked the tourism industry as a priority area (VCTF Annual Report, 2007). The government also has a policy of granting tax relief on inputs imported for the operation of tourism ventures. Additionally, the Ghana Tourist Board also organizes various forms of training programmes periodically for employers and employees in the industry (Field interviews, 2007).

Methodology

Population/Sample

The total population comprised all women entrepreneurs who have founded tourism ventures, registered such businesses in their own names and the businesses have been duly approved by the Ghana Tourist Board. The sample was 248 women drawn from six out of the ten administrative regions of Ghana, whose businesses had been licensed by the Ghana Tourist Board. These regions were selected because of their rich tourism potentials, high number of tourism ventures and attraction sites. Since some regions have more tourism ventures than others, with some regions having more of a particular venture type than others the quota sampling method was employed to ensure that the number of participants for each data collection exercise was representative of the various venture types identified and also reflected the numerical strength of these venture types in each of the regions under study. The researchers also employed judgment sampling so that care was taken to select participants who could best help answer the research questions for each of the three data collection exercises. This is because the population had various levels of experiences and so care was taken to select women who had at least two years experience as it was anticipated that they would have much personal experiences and could therefore answer questions raised during
the data collection. No participant took part in more than one data collection exercise.

**Data Collection/Analysis**

This study placed premium on the need to capture data which reflects the richness and uniqueness of participants’ experiences. This was because it is perceived that the Ghanaian female business owner in tourism had a unique experience to share in relation to her motivation and support from government. The mixed methodologies approach was employed, integrating qualitative and quantitative techniques for data collection so as to benefit from additional insights a single methodology may not provide (Cresswell, Fetter & Ivankova, 2004).

Data were collected from six administrative regions of Ghana using a three stage approach. First, a focus group meeting of 12 women was organised. The main objective of the meeting was to find out the views of participants on the study variables. This was followed by a survey of 200 respondents to examine the issues discussed during the focus group meeting from the perspective of a larger group of participants. To achieve this, data from the focus group were used to design a questionnaire for the survey. An instrument, originally developed by Brush (1988) and later adapted for use by Saffu and Manu (2004) guided the researcher in the arrangement of the items. Responses for motivation and government support were measured on a scale of 1 = not significant, to 5 = very significant. The response rate was 75%. Finally, to further explore the issues raised during the focus group meeting and the survey, a series of in-depth interviews involving another set of 30 women was undertaken. Each interview lasted between one and half to two hours. The focus group and in-depth interview data were subjected to conversational analysis, while the survey data were factor analysed. Regression analyses were performed to determine the influence of
government support on motivation.

Results

Focus Group

During the focus group meeting 11 out of the 12 participants said they were motivated by passion/interest to found their ventures and 10, by the need for independence. Thus these two factors appeared to be common among the participants. Nine of them said they were motivated by the need for personal satisfaction and another 9 by the need to make money. Eight were also influenced by the need for respect/prestige and another 8 by the desire to meet a need. It is obvious then that these factors, passion, personal satisfaction, money, respect/prestige and the desire to meet a need were more predominant among the women compared to the others namely, redundancy (1 participant), need to set up a new venture (3 participants), and the desire to invest excess cash (5 participants).

From the view point of the women they did not enjoy any support from the government. They unanimously chorused “government support is nil, where nil means nil”. Further interviewing however revealed that there was some form of support but the participants felt it was inadequate. For example, they mentioned the fact that Ghana Tourists Board organised regular training for them and their employees. However since they had to pay to attend such training, then to them, that was no form of support. The researchers then went on to find out what their expectations were in terms of support from the government. It emerged from the discussions that all the 12 women wanted the government to help tourism by setting up schools to train professionals and also make Ghana an attractive destination in order to attract more tourists. Ten wanted the attraction sites to be better developed and 9 called for improvement in the road network. Finally, 6 participants expected the government to reduce the number of taxes they paid and also facilitate access to funding for their businesses. From the responses, it emerged that the need for schools and development of the tourist sites were foremost.

Survey

From the focus group discussions, nine motivation dimensions were identified. These were passion/interest, respect/prestige, need to set up a new venture, desire to fulfill a need, the
need to invest excess cash, redundancy, need for independence, personal satisfaction and the need to make money. These findings were used to design a questionnaire for a survey. The significance of each dimension was measured on a five-point scale from 1(not significant) to 5(very significant). Registering a Cronbach reliability coefficient of $A = 0.615$ a KMO sampling adequacy of .740 and .000 significance for the Bartlett’s Test of Sphericity, the nine dimensions loaded on three factors.

The first factor comprised five items namely, passion/interest, personal satisfaction, independence, and desire to fulfill a need and need to make money. This factor was labeled personal motivation factors because they stemmed from the individual’s desire to achieve those goals. It had a loading greater than 0.50.

The second factor included the need to invest excess capital, need to set up a new venture and the need for prestige/respect. This factor was labeled strategic motivation factors because one required systematic and deliberate planning to be able to realise those goals. This factor also had a loading greater than 0.511.

The third factor had a single item of redundancy, which had a factor loading of 0.926. This factor was labeled circumstantial motivation factor, because one did not plan, as it were, to become redundant. It is a situation one found himself in and mostly not of the making of the individual.

In summary, the factor analysis of the motivation factors resulted in three components namely, personal, strategic and circumstantial motivation factors.

To measure government support, six items emerged from the focus group meeting. These were tourism training institutes, the tourist sites, visa for tourists, tax reductions, funding and the road networks. Again, these findings were used to design a questionnaire for a survey. Similar to the other variables, the significance of each item was measured on a scale from 1(not significant) to 5(very significant). A reliability analysis recorded a coefficient of $A= 0.766$, a KMO sampling adequacy of 0.784 and .000 significance for the sphericity. All six items loaded on a single factor which was labeled government support package for tourism ventures. The factor loading was greater than 0.490.
**In-depth Interviews**

Table 1 represents a summary of responses from the participants who were interviewed.

**Table 1 Summary of Responses From In-Depth Interviews**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Properties</th>
<th>Resps. (30)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>• Money</td>
<td>14</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td>• Redundancy</td>
<td>14</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td>• Desire to fulfill a need</td>
<td>16</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>• Set up a new venture</td>
<td>16</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>• Respect/Prestige</td>
<td>17</td>
<td>56.7</td>
</tr>
<tr>
<td></td>
<td>• Independence</td>
<td>18</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>• Invest excess capital</td>
<td>24</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>• Passion/interest</td>
<td>25</td>
<td>83.3</td>
</tr>
<tr>
<td></td>
<td>• Personal satisfaction</td>
<td>26</td>
<td>86.7</td>
</tr>
<tr>
<td>Government Support</td>
<td>• Development and improvement of road network</td>
<td>13</td>
<td>43.3</td>
</tr>
<tr>
<td></td>
<td>• Reduction in the multiplicity of tourist sites</td>
<td>20</td>
<td>67.7</td>
</tr>
<tr>
<td></td>
<td>• Facilitating access to funding</td>
<td>20</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>• Reduction in the multiplicity of taxes</td>
<td>20</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>• Easing visa restrictions and taking steps to make Ghana a less expensive destination.</td>
<td>23</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>• Establishing schools to train professionals for the tourism industry.</td>
<td>28</td>
<td>93.3</td>
</tr>
</tbody>
</table>

Source:  Field Interview, 2007

Table 2 compares data from all three data gathering exercises. It is obvious to a large extent, that the frequencies of the responses from the focus group were confirmed by responses from the survey and interviews. The only exception was redundancy where the recorded rotated matrix was a high of .926 compared with 46.7% response from interviewees and 8.3% from focus group participants. The difference might be due to the composition of the sample for the interview and focus group. Probably not many of the ladies chosen for these exercises had experienced redundancy, though data from the survey indicate that it (redundancy) is a significant motivation for women to go into self-employment. Due to the fact that the data from the focus group were confirmed by data from the survey and interviews, the factor loadings from the factor analysis were accepted as the constructs (in the context of this study) for motivation and government support.
### Table 2: Comparison of Rotated Component from Survey and Responses from Focus Group and In-depth Interviews

<table>
<thead>
<tr>
<th>Variable</th>
<th>Properties</th>
<th>Focus Group Responses (%)</th>
<th>Interview Responses (%)</th>
<th>Rotated Component from Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>• Redundancy</td>
<td>8.3</td>
<td>46.7</td>
<td>.926</td>
</tr>
<tr>
<td></td>
<td>• New venture</td>
<td>25</td>
<td>53</td>
<td>.544</td>
</tr>
<tr>
<td></td>
<td>• Invest excess capital</td>
<td>41.7</td>
<td>80</td>
<td>.841</td>
</tr>
<tr>
<td></td>
<td>• Fulfill a need</td>
<td>66.7</td>
<td>87</td>
<td>.579</td>
</tr>
<tr>
<td></td>
<td>• Respect/Prestige</td>
<td>75</td>
<td>86.7</td>
<td>.512</td>
</tr>
<tr>
<td></td>
<td>• Money</td>
<td>75</td>
<td>86.7</td>
<td>.501</td>
</tr>
<tr>
<td></td>
<td>• Personal Satisfaction</td>
<td>91.7</td>
<td>83.3</td>
<td>.773</td>
</tr>
<tr>
<td></td>
<td>• Independence</td>
<td>83.3</td>
<td>60</td>
<td>.783</td>
</tr>
<tr>
<td></td>
<td>• Passion/Interest</td>
<td>91.7</td>
<td>83.3</td>
<td>.609</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.983</td>
</tr>
<tr>
<td><strong>Government Support</strong></td>
<td>• Reduction in multiplicity of taxes</td>
<td>50</td>
<td>66.7</td>
<td>.642</td>
</tr>
<tr>
<td></td>
<td>• Improving access to Funding</td>
<td>50</td>
<td>66.7</td>
<td>.664</td>
</tr>
<tr>
<td></td>
<td>• Improving the road network</td>
<td>75</td>
<td>43.3</td>
<td>.491</td>
</tr>
<tr>
<td></td>
<td>• Improving Tourist sites</td>
<td>83.3</td>
<td>83.3%</td>
<td>.709</td>
</tr>
<tr>
<td></td>
<td>• Easing visa restrictions and taking steps to make Ghana a less expensive destination.</td>
<td>100</td>
<td>76</td>
<td>.704</td>
</tr>
<tr>
<td></td>
<td>• Establishing schools to train professionals for the tourism industry.</td>
<td>100</td>
<td>93.3</td>
<td>.799</td>
</tr>
</tbody>
</table>

Source: Field Interviews/Surveys, 2007

### Regressions

From Table 3, it appears that government tended to (suppress or) interfere with the personal motivation factor (p), accentuate the circumstantial motivational factor (c) and had a reverse effect on the strategic motivation factor (s) when present.

### Table 3: Standardized βs for Predictor Variables P, S and C at the Two Levels of Government Support.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Supported</th>
<th>Not Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>0.558</td>
<td>0.782</td>
</tr>
<tr>
<td>S</td>
<td>-0.106</td>
<td>0.106</td>
</tr>
<tr>
<td>C</td>
<td>0.072</td>
<td>0.036</td>
</tr>
</tbody>
</table>
Discussion

Demographics of Respondents

As shown in Table 4, a total of 192 women participated in the three data collection exercises – 12 focus group participants, 150 survey respondents and 30 interviewees. Statistics of their background characteristics indicated that women in Ghana’s tourism industry were more likely to found accommodation and catering ventures. Most of the women fell within the 40 to 49 age bracket and had operated for between two to nine years. Such women were likely to be married and mostly diploma holders. Though an appreciable percentage (44.9%) had entrepreneurial background, a majority had no previous entrepreneurial experience.

Table 4: Summary of Respondents’ Demographics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Responses in Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Business</strong></td>
<td></td>
</tr>
<tr>
<td>accommodation</td>
<td>47.4%</td>
</tr>
<tr>
<td>catering</td>
<td>35.2%</td>
</tr>
<tr>
<td>transport</td>
<td>3.2%</td>
</tr>
<tr>
<td>tour</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Years in Business</strong></td>
<td></td>
</tr>
<tr>
<td>25 - 30</td>
<td>13.5%</td>
</tr>
<tr>
<td>10 – 24</td>
<td>37.5%</td>
</tr>
<tr>
<td>2 - 9</td>
<td>48.7%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>20 – 29</td>
<td>2.1%</td>
</tr>
<tr>
<td>30 – 39</td>
<td>13.1%</td>
</tr>
<tr>
<td>40 – 49</td>
<td>38.2%</td>
</tr>
<tr>
<td>50 – 59</td>
<td>31.9%</td>
</tr>
<tr>
<td>60 and above</td>
<td>14.6%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>never married</td>
<td>5.2%</td>
</tr>
<tr>
<td>married</td>
<td>73.8%</td>
</tr>
<tr>
<td>divorced</td>
<td>13.9%</td>
</tr>
<tr>
<td>widowed</td>
<td>9.6%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>4.8%</td>
</tr>
<tr>
<td>middle/JHS</td>
<td>11.6%</td>
</tr>
<tr>
<td>secondary</td>
<td>24.9%</td>
</tr>
<tr>
<td>diploma</td>
<td>41.8%</td>
</tr>
<tr>
<td>degree</td>
<td>6.3%</td>
</tr>
<tr>
<td>others</td>
<td>10.6%</td>
</tr>
<tr>
<td><strong>Entrepreneurial Experience</strong></td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>32.8%</td>
</tr>
<tr>
<td>none</td>
<td>67.2%</td>
</tr>
<tr>
<td><strong>Entrepreneurial Background</strong></td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>44.9%</td>
</tr>
<tr>
<td>none</td>
<td>55.2%</td>
</tr>
</tbody>
</table>
Motivation

Analysis of data gathered from focus group discussions, survey and in-depth interviews revealed that Ghanaian business women set up tourism ventures out of passion/interest, the desire for personal satisfaction, independence, need to make money, the desire to fulfill a need, the need to invest excess capital, the desire to set up a new venture, need for respect and redundancy. Table 5 presents some of the explanations participants gave for each of the factors.

Table 5: Explanations of Motivation Factors

<table>
<thead>
<tr>
<th>Motivation Factors</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passion/interest</td>
<td>The extent to which an individual loves her work.</td>
</tr>
<tr>
<td>Personal Satisfaction</td>
<td>The desire for personal happiness and self-fulfillment derived from a sense of accomplishment.</td>
</tr>
<tr>
<td>Independence</td>
<td>The desire for freedom from serving as an employee to another and being one’s own boss.</td>
</tr>
<tr>
<td>Money</td>
<td>The need to earn more money, increase personal and family wealth to pass on to children and also to achieve financial security.</td>
</tr>
<tr>
<td>Desire to fulfill a need</td>
<td>A chance to do something which needs to be done and which one had always wanted to do.</td>
</tr>
<tr>
<td>Need to Invest Excess Capital</td>
<td>The desire to put extra money to use in order to generate more money.</td>
</tr>
<tr>
<td>Need to Set Up a New Venture</td>
<td>The desire to found a new business normally in addition to what one already operates or divesting altogether.</td>
</tr>
<tr>
<td>Need for Respect/Prestige</td>
<td>The desire to have status, approval and recognition from one’s family, friends and community.</td>
</tr>
<tr>
<td>Redundancy</td>
<td>The need to start a job because one has lost her employment.</td>
</tr>
</tbody>
</table>

Source: Focus Group Discussion, 2007

A factor analysis of these motivation factors loaded into three categories which were labeled personal factor, strategic factor and circumstantial factor as depicted in the following Table 6.
Table 6: Factor Loadings of Motivation Factors

<table>
<thead>
<tr>
<th>Personal Factor</th>
<th>Strategic Factor</th>
<th>Circumstantial Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Passion/Interest</td>
<td>• Need to invest excess capital</td>
<td>Redundancy</td>
</tr>
<tr>
<td>• Personal satisfaction</td>
<td>• Need to set up a new venture</td>
<td></td>
</tr>
<tr>
<td>• Independence</td>
<td>• Need for respect/prestige</td>
<td></td>
</tr>
<tr>
<td>• Need to make money</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Opportunity to fulfill a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Need</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A comparison of motivations factors identified in this study and those identified in the prior studies referred to earlier, indicated that most of the factors, except for three (passion, need to invest excess cash and redundancy) appeared to be common in influencing women to choose self-employment. These common motivation factors included personal satisfaction, independence, money, desire to fulfill a need, the need to set up a new venture, and respect. With the exception of money (a “push” factor) all these factors are “pull” factors. The “pull” factors were influential for women in developed countries as well. Of particular interest, were independence and money as these cut across all the cited studies which had been carried out mostly in advanced economies such as the United States, United Kingdom and South Africa. The need for independence and money therefore appeared to be important issues that were influential in explaining entrepreneurial behaviour irrespective of gender, industry and country.

There were however, three reasons participants in this study offered which appeared not to have been cited in the previous studies. These reasons were passion/interest, the need to invest excess capital and redundancy. The high rotated matrix components recorded for these factors (passion/interest - .783, the need to invest excess capital - .841 and redundancy -.926) also suggest their high strength.

The fact that the women established tourism ventures because of passion/interest could be attributed to the female socialisation process in Ghana, which placed premium on good skills for cooking, housekeeping and caring for visitors to the home (Bour, 2007; Brown, 1994) and to enjoy doing that. These skills, invariably were critical for running tourism ventures such as accommodation and catering ventures (which this study found to be most preferred by women). Since the skills required for operating tourism business, and those females in Ghana have acquired through their upbringing were congruent, they naturally tended to have great
interest in and enjoy carrying out activities in their tourism business, with the same passion with which they cooked and cared for their families. The following statements from some participants, further supported this explanation:

- “I enjoy serving visitors.”
- “Women like meeting people and caring for them so the tourism business fits well with their interest.”
- “I enjoy receiving and catering for guests.”

A second distinctive reason which emerged from this study was that of the need to invest excess capital. The typical African woman, including the Ghanaian (especially one from a matrilineal society), bore greater responsibility for providing for the needs of the family (Loscocco, 1991), especially those of her children. There was therefore the need for women to be in business to earn money to effectively discharge these responsibilities. It had also been generally reported in the literature that women-owned businesses attracted less investments in comparison to men-owned businesses (Aidis et al, 2006; Gundry & Yoseph-Harold, 2004) and the Ghanaian woman was no exception (Saffu & Manu, 2004). It was thus plausible that, this pressure to care for the family and the lack of investor interest in women-owned businesses might have motivated the women in this study to save and invest any excess capital in another business in order to improve their financial security and that of their family (Gooding & Mischel, 2007; Portes & Shauffer, 1993), and it is only reasonable to expect that they would invest in a business for which they had the necessary skills and could manage successfully. Two interviewees said:

- “I have always wanted to invest my profit somewhere else – a profitable project to make more money”.
- “You do not have to put all your eggs in one basket, so I have to invest in another business”.

The final reason which appeared to be unique to this study was redundancy and this could be attributable to that fact that Ghanaian women appeared to be vulnerable to such redundancy exercises. Again, this could be due to the fact that women, especially those from developing countries, had generally been cited for low educational background (GEM Report, 2002; Buttner & Moore, 1997). In Ghana for example, male children were favoured in the provision of basic facilities in life including education (Bour, 2007). With their low educational background, (as found in this study – mostly diploma holders) compared to men, women would have less valuable work (Borden & Nucci, 2000), occupying the lower levels of the
organisation and would therefore be ready targets for any redundancy exercises – a phenomenon which had gained some frequency in Ghana since the 1990s. Since the women had a responsibility to cater for their family, especially the children, they found redundancy as an unbearable experience they never wished to reoccur. They thus did not want to be hit by redundancy again and with low educational background the best option was self employment. In the words of one participant:

- “This is my own business and nobody will declare me redundant”.

They further enhanced their job security by choosing ventures for which they had the requisite skills and were therefore confident of success. An interviewee expressed it this way:

- “Tourism is related to what women can do best – that is taking care of the home and attending to visitors. Women therefore find it easier to found and manage tourism businesses.”

Findings on Gender and Entrepreneurial Motivations

Gatewood et al (1995) argued that the intrinsic reasons or “pull” factors were more important to women than the extrinsic reasons or “push” factors. Buttner & Moore (1997) and Orhan & Scott (2001) on the contrary said that the “pull” factors influenced the women less. Mitchell (2004) reporting from South Africa also posited that, women placed more value on the “pull” factors. Moult and Anderson (2005) also suggested that an individual may be influenced by a combination of both factors. In this study it was observed that both types of motivation factors had an influence of the women. However the “pull” factors appeared to account more for the self-employment behaviour of the women.

Government Support

The responses of the women suggested that government support was insufficient. Though they acknowledged the fact that the Ghana Tourist Board from time to time organised training programmes for them, they did not consider that as a form of support since they had to pay to benefit. The researcher then went ahead to find out what form of support they expected from the government.

The results of the data analysis revealed that the women needed government support in the areas of improved road network, improved tourist sites, reduction of taxes, funding, facilitating tourists arrivals and establishment of tourism training institutions. All these six items loaded on a single dimension after a factor analysis and was labeled government
support. Table 7 presents an explanation of these forms of support from the point of view of the participants of this study.

<table>
<thead>
<tr>
<th>Type of Government Support</th>
<th>Explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road network</td>
<td>Development and improvement of road network.</td>
</tr>
<tr>
<td>Tourist Sites</td>
<td>Development and improvement of tourist sites.</td>
</tr>
<tr>
<td>Reduction of taxes</td>
<td>Reduction in the multiplicity of taxes</td>
</tr>
<tr>
<td>Funding</td>
<td>Facilitation of access to funding</td>
</tr>
<tr>
<td>Facilitating Tourists</td>
<td>Easing visa restriction and taking steps to make Ghana an</td>
</tr>
<tr>
<td>Arrivals</td>
<td>attractive and a less expensive destination.</td>
</tr>
<tr>
<td>Tourism Training</td>
<td>Establishing schools to train professionals for the tourism</td>
</tr>
<tr>
<td>Institutions</td>
<td>industry.</td>
</tr>
</tbody>
</table>

Source: Focus Group Discussion, 2007

Further, it appeared that the most critical form of support the women expected from the government was the establishment of schools to train professionals for the tourism industry. This was evidenced by the highest interview response of 93.3% and the highest rotated matrix component value of .799. This was followed in order of priority (based on the data presented in Table 6 above), by development and improvement of the tourist sites, then facilitation of tourist arrivals, reduction of taxes, funding and development of the road network. The results suggested a need for more of indirect forms of support than the direct support of financing. Unlike women in other studies, for the Ghanaian woman operating a tourism venture, funding did not appear to be the foremost problem. This was probably because they preferred to grow their businesses gradually which they could conveniently do by ploughing back the proceeds. Again, as was established during the interviews, they found the interest rates from the banks unattractive. They only sought external financial assistance mostly overdrafts and small monies which they referred to as “a little push” to finish off projects they had virtually completed unaided (Constantinidis et al, 2006). Funding therefore was not the number one support they needed, contrary to findings from other studies on women entrepreneurs in other industries and from developed countries (Aidis et al, 2006; Gundry & Yoseph-Harold, 2004).

The Relationship Between Motivation and Government Support

The regression was at two levels – supported by government and not supported by government as seen in Table 8. From the results, it was observed that P (personal factor) was
relatively high in both instances of support from government and no support from government. It therefore appeared that government support did not have significant effect on P. This could mean that women who were motivated by personal factors would work hard whether they were supported by the government or not. Once again, it was possible that the combination of “pull” factors (of independence, passion, personal satisfaction, desire to fulfill a need – all being intrinsic) and the “push” factor (money, which was crucial in developing countries) made the women work hard whether there was government support or not.

The strategic factor of motivation (S) (comprising the need to invest excess capital and the need to set up another venture) appeared to have a negative relationship with government support. However, some form of increase was observed when there was no support from government. It was plausible that women entrepreneurs were less willing to invest in another business for strategic reasons, when supported by government. On the other hand they had more strategic motivations – that is the desire to invest in another business, when there was no government support. This was probably to enhance their financial security.

The beta coefficient of the last motivation, which is the circumstantial factor (C), showed no significant relationship with government support. Probably, women who are “pushed” into setting up tourism ventures due to redundancy, had less desire to invest in another business.

Table 8: Standardized βs for Predictor Variables P, S and C at the Two Levels of Government Support.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Supported</th>
<th>Not Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>0.558</td>
<td>0.782</td>
</tr>
<tr>
<td>S</td>
<td>-0.106</td>
<td>0.106</td>
</tr>
<tr>
<td>C</td>
<td>0.072</td>
<td>0.036</td>
</tr>
</tbody>
</table>

Conclusion and Implications

The aim of the study was to establish reasons why women in Ghana set up tourism businesses, identify the level of support they received from the government and to determine the extent to which motivation was influenced by government support. The study revealed that women SMTV owners are motivated by personal, strategic and circumstantial factors. They expected
government support such as improved road network, improved tourist sites, reduction of
taxes, funding, facilitating tourists arrivals and establishment of tourism training institutions.
The drop in the beta coefficients for personal and strategic factors of motivation, when there
was government support, suggested that government support interfered with these motivation
factors, all of which were “pull” factors. This was contrary to findings which indicate that
government support was generally good for small businesses (Smallbone & Welter, 2001; Robson & Bennett, 2000). It appeared that the women tended to be less motivated to invest
in another business when they had government support. It was possible that this could be due
to certain situational factors, which may warrant further research, supporting Gartner’s (1985)
call for more investigation to determine situational variables and their effect on the
entrepreneurship process.

The study helps to deepen our understanding of female entrepreneurship in particular and
entrepreneurship in general. It also helps to improve appreciation of the varied nature of the
context of small/medium enterprises in the tourism industry. Further, it leads to a better
understanding of entrepreneurial motivations and government support among female-owned
tourism ventures. Finally, the study helps to improve our understanding of entrepreneurship in
the context of a developing country.

Based on the above conclusions, the following recommendations we propose the following
recommendations for policy makers, trainers, practitioners and researchers.

**Recommendations for Policy Makers**

a. Being an infant industry, tourism needs regular, constant and appropriate attention to
develop.

b. The government of Ghana and other policy makers should pay particular attention to
policies which could create the necessary conducive atmosphere to promote and
support the sustainable growth and development of the tourism industry. In this
regard, particular attention should be paid to policies which will facilitate the
development of curricular and the setting up training institutions to train local
professionals to work in the industry. This is because the women in this study showed
a preference for indirect government support.
c. Attention should also be paid to the development of the tourist sites such that the experience provided at such sites will compel the tourists to make repeat experience.
d. There was also the need to remove obstacles associated with visa acquisition and take steps to get the airfare to the country more competitive to facilitate tourist arrivals.
e. Efforts should directed towards the reduction of the multiple taxes. Tourism business owners paid over ten different taxes which is rather too much.
f. There was also the need for intensification of efforts in getting the girl child to go to school and pursue higher education as this would improve her performance in any endeavour. The women in this study were found to be mostly diploma holders, which was a worrying situation.

**Recommendations for Trainers**

a. Based on the finding that women were motivated to found tourism businesses due to personal factors. Trainers should identify prospective women entrepreneurs’ personal factors as targets for training and support since they are likely to perform better in business, compared to those with strategic or circumstantial motivation.

**Recommendations for Practitioners**

a. Ghanaian women in tourism businesses should form associations to lobby legislators and other policy makers to pay particular attention to the issues that are important to them including the establishment of schools to train professionals for the industry, proper development of the tourist sites, facilitation of tourist arrivals and the reduction of multiple taxes as these were very important to the women.
b. The women should develop a passion for their work since this will positively influence the growth of whatever tourism venture they found, whether supported by government or not.

**Suggestions for Further Research**

a. Since this study focused on the tourism industry, the findings may not be fully applicable to other sectors such as manufacturing and retail. The study should be replicated in other sectors of the economy.
b. The findings of this study could further be tested on male entrepreneurs or in a comparative study of both males and females.
c. Future research should also consider a cross-country comparative study of women in tourism industry.

d. This study revealed that government support interfered with motivation. There is therefore the need for further research to identify which specific situational variables influenced the effect of government support on motivation.

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The prospects of fostering technopreneurial self-efficacy among under-graduates students at a University of Technology in South Africa

South Africa still grapples with the profound economic disparities left by the combined legacies of colonialism and apartheid. The country capacity to absorb new recruits into formal sector has fallen from approximately 64% to less than 4%.

Successful development and promotion of technopreneurship self-efficacy among the country’s students is one of many powerful business tools that may also be able for the country to drive the economy back to prosperity and competitiveness.

This study investigated the prospects of fostering technopreneurial self-efficacy among IT under-graduates students and the findings thereof are shared.
From Resource “Access” to “Use”: Exploring How the Combination of Human, Social, and Financial Capital Impact Individuals’ Entry into Nascent Entrepreneurship

Kim Klyver, University of Southern Denmark
Mark Schenkel, Belmont University

Abstract

Whereas prior research has primarily investigated the independent effects of financial, human, and social capital on the decision to create a new venture, little research has investigated the combined effects leaving potentially meaningful interdependencies less well understood. This study addresses this void explicitly by focusing on three questions designed to investigate not only the independent effects, but also the combined effect of human, social, and financial capital influences on the decision to create a new venture. First, to what extent do human, financial, and social capital independently influence the decision to create a new venture? Second, does the influence of social networking on the decision to create a new venture depend upon the level of human and/or financial capital? Third, are these influences on the decision to create a new venture consistent across men and women? We hereby change the focus from a resource access approach to a use approach.

Introduction

The links between an individual’s access to various human, social, and financial resources and the decision to create new ventures provide compelling research focal points (for example, Davidson and Honig, 2003). These foci derive largely from the idea that resources facilitate opportunity development efforts through the various nascent venture stages. For example, studies suggest social networks are not only fundamental to opportunity recognition (for example, Singh, 2000), but also play a substantive role in resource acquisition process (for example, Brush and Greene, 1996) that assists ongoing development efforts to exploit entrepreneurial opportunity through the creation of new ventures (Larson and Starr, 1993).

Research investigating the influences of access to human, social, and financial capital on new venture creation outcome variables such as the start-up decision, survival, growth, and profit has yielded important theoretical insights about the independent influences of each. By contrast, little research has investigated how the entrepreneurs seek to combine various capital resources suggesting that the interactive nature of such influences remains less well
understood. For example, Mosey et al. (2007) note that the temporal sequence of nascent entrepreneurial capital development remains less than fully understood, in part, because few studies have examined how the specificity of human capital relates to the decision to create a new venture within the context of social capital.

The lack of entrepreneurship studies focusing explicitly on the interactive influences of human, social, and financial capital is surprising for at least two reasons. First, though agreement remains elusive on the direction of causality, sociologists have noted the interplay between human and social capital (Coleman, 1988). Second, it is well established in social capital research that certain network contacts may become redundant if the same resources are available through other contacts in the network (Burt, 1992), an observation which suggests differences in entrepreneurs’ approaches to network use may hold important insights into the new venture creation process.

This study addresses this void explicitly by focusing on three questions designed to investigate not only the independent effects, but also the combined effect of human, social, and financial capital influences on the decision to create a new venture. First, to what extent do human, financial, and social capital influence the decision to create a new venture independently? Second, does the influence of social networking on the decision to create a new venture depend upon the level of human and/or financial capital? Third, are these influences consistent across men and women? By adopting a perspective that begins by acknowledging social embeddedness, we change the focus from resource “access” to “use.”

**Capital theory & hypothesis development**

**The ‘access’ approach to resources**

Capital theory’s (Coleman, 1988) importance has increased significantly since its introduction to organizational and entrepreneurship research. The import of capital theory from sociology to organizational and entrepreneurship theory has mainly taken place through
the resource-based perspective (Wernerfelt, 1984). From the resource-based perspective, it is argued that a firm’s or an entrepreneurs’ competitive advantages are generated by the resources available rather than the product-market position. The keyword is ‘availability’ of resources. Stevenson and Jarillo (1990) argued that entrepreneurship is the process of pursuing opportunities “... without regard to the resources they currently control” (p. 23). Thus, what matters is the ability to pursue an opportunity through access to various resources.

Burt argues for the division of capital resources into three categories. Financial capital is essentially the money in people’s pockets; human capital is the knowledge and capacity within human beings; and social capital is the value of resources generated by people’s social networks (Burt, 1992).

Previous research clearly shows how financial capital is essential for long term success of start-ups. Lack of financial capital at the initiation of the business may hinder or preclude the start-up process with long term consequences for performance (for example, Verheul and Thurik, 2001). Financial capital can be obtained externally through debt and investors or internally through use of personal savings.

In this study, we are interested in financial capital in terms of personal savings generated through household income. We argue that financial resources are not only important for the long term performance but also to the initial decision to start a business for at least three reasons. First, we argue that individuals are generally aware of the importance of financial resources for long term success. They realize that the lack of sufficient financial resources may lead to subsequent potential difficulties, which in turn decreases the likelihood they will decide to enter the start-up process. Second, they realize that if no or not enough external funding can be obtained, then personal funding is the only remaining source. Bhide (1992) argued that new ventures are generally a “poor fit” for traditional lending models, which suggests that nascent entrepreneurs may frequently confront the lack of external funding
availability. As a result, the decision to start often depends strictly on personal funding availability. Third, and interestingly, anecdotal evidence (Mamis, 1994) suggests that nascent entrepreneurs may actually prefer the simplicity and ease of access of personal financing sources. Hutchinson (1995) argued that such a preference could reflect an unwillingness to bear the added risk or need to share control that accompanies external funding sources. As a result, the perceived risk or consequences of failure may be influenced positively (that is, lessened) by the level of personal funding employed. Thus, we argue that to financial capital in terms of household income is related positively to the start-up decision.

Hypothesis 1: Financial capital, measured as household income, is positively related to individuals’ likelihood to enter the nascent new venture creation process.

Human capital is the knowledge and capacity within individuals to perform certain tasks. Becker (1993) describes human capital as an investment through which individuals expect economic returns. Prior research clearly shows how human capital influences various entrepreneurial outcomes such as start-up decision and penetration through early stages, survival of new business, growth, and performance (Davidsson and Honig, 2003; Bates, 1990). Human capital is operationalized in many different ways but traditionally it has involved some measures of education level and experience (Dyke et al., 1992). Previous results show that education, both formal general education and specific entrepreneurial training, increases entrepreneurs’ likelihood to perform well. By contrast, empirical results reflecting the impact of practical experience on entrepreneurial performance are mixed. For example, despite a seemingly intuitive practical connection, results have not demonstrated an impact for management on entrepreneurial survival (Bates, 1990). Industry experience, on the other hand, does appear to have a positive impact on entrepreneurial performance (Brush and Hisrich, 1991). Empirical results regarding start-up experience are somewhat mixed though
there is increasing evidence that it plays a critical role in facilitating persistence during the early stages of venture creation (for example, Davidsson and Honig, 2003).

Traditionally, human capital has been approach from an objective point of view, focusing on variables that are often measurable independent of individuals’ own perception. We argue further that individuals’ own perception of their human capital also plays an important role in start-up decisions. Specifically, we argue that individuals develop a sense of self efficacy (Bandura, 1977) based on a combination of their genetic predisposition and cumulative personal experience. Self-efficacy represents an individual’s belief in his or her capability of organizing and effectively executing actions to produce outcomes. Accordingly, it reflects an important aspect of an individual’s internally oriented knowledge base. Research has suggested that entrepreneurs possess higher levels of self-efficacy than non-entrepreneurs (Boyd and Vozikis, 1994) though extant research has not explicitly focused on the relationship between self-efficacy and nascent entrepreneurial decision making (Schenkel, 2005). Given the limited yet growing evidence, we argue that self-efficacy will positively influence the decision to enter the new venture creation process.

Hypothesis 2: Human capital, measured as a) formal education, b) start-up experience, and c) self-efficacy, is positively related to individuals’ likelihood to enter the nascent new venture creation process.

Social capital is the potential value embedded within and that individuals obtain from their social structures, relationships, memberships, and networks (Burt 1992). The value may take many different forms but traditionally include information, legitimacy, trust, and emotional support. Conventional wisdom suggests social relationships and networks positively influence entrepreneurial performance (Singh, 2000), but debate continues as to which kinds of relationships and network structures are most influential. For example, from a resource-based perspective, it has been argued that relatively many weak ties and a network structure with
many structural holes among heterogeneous actors are more likely to “bridge” sources of otherwise non-redundant information. By contrast, it has been argued that relatively many strong ties and close homogenous network structure provide entrepreneurs with the necessary sensitive information, trust and emotional support, or “bonding” resources, less likely to be obtained from weak ties and diverse networks (Davidsson and Honig, 2003).

Although debate persists as to the kind of network relationships and structures that are productive in the start up process, empirical results have consistently shown that people embedded in networks containing individuals with entrepreneurial experience tend to be more entrepreneurial oriented themselves. Specifically, people who have close family members in business or personally know someone who has started a business (Klyver et al., 2008) seem to have a greater probability of becoming entrepreneurs.

Hypothesis 3: Social capital, measured as whether or not an individual personally know someone who have started a business in the past two years, is positively related to individuals’ likelihood to enter the nascent new venture creation process.

The ‘use’ approach to resources

The hypotheses above follow the traditional ‘access’ approach, an approach which is derived from the basic idea is that access or availability of resources is essential – the more the better. One implication of such an ‘access’ approach is that it has led to the effects of financial capital, human capital and social capital being investigated independently. However, we argue it is not only the access to resources or independent availability of resources that matters but also how they are combined and used together that impacts the decision to enter the new venture creation process.

The lack of attention directed toward ‘use,’ or the interaction among the capital sources in entrepreneurship research, is surprisingly for at least two reasons. First, sociologists for decades have discussed the interplay between various capitals. Bourdieu (1986), for instance,
theorized about social capital’s effect on human capital, arguing that inherited social capital produces human capital. Coleman (1988) followed Bourdieu’s argument with his empirical investigation of how social capital of parents supports the human capital development of their children. In a more practical vein, Greve et al. (2006) argued that individuals need human capital in order to take advantage of social capital. Others have argued the directionality of causation between human and social capital is reversed (Boxman et al., 1991). In total, sociologists work suggests that although the causality question remains unsettled, human and social capital seem to be closely interrelated in their production.

Second, in social capital theory it is conventional wisdom that certain actors might be redundant if they provide resources already accessible through other contacts (Burt, 1992). Extrapolating this logic to the three capitals, one implication is that different capitals might be compensatory in nature. For instance, financial capital may offset the lack of personal human capital if the entrepreneur has financial capital that can buy the same expertise. Consequently, it seems reasonable to argue that human, social, and financial capitals in many situations depend on each other.

Given these reasons, we argue that one fruitful avenue for advancing entrepreneurship research is to examine the interplay among the three capitals and its respective influence on entrepreneurial outcomes. This interplay between capital resource types can reflect a ‘use’ characterized in one of three different ways: complementary, substitution, or neutral.

The first is a complementary use. A complementary use prevails when capital forms are utilized as co-productive mechanisms that reinforce one another’s influence in the same way. Mosey and Wright’s (2007) study of technology-based academic start-ups reveals that entrepreneurs with prior business ownership experience have broader social networks and are more effective in developing network ties is an example of a complementary influence. It suggests that ownership experience may have a complementary impact on efforts designed to
foster the development of entrepreneurial opportunity (Ardichvili, Cardozo, and Ray 2003).

Ottosen and Klyver’s (forthcoming) study of entrepreneurs also showed how human and social capital can be co-productive in the sense that entrepreneurs’ education level and self-efficacy increase social capital in form of network size.

The second use is substitution oriented use. A substitution use prevails when capital forms are utilized as alternatives to one another. In entrepreneurship studies, the substituting mechanism is consistent with Brüderl and Preisendörfer’s (1998) ‘network compensation hypothesis,’ a hypothesis which suggests that social capital is sometimes employed to compensate for shortcomings in human capital. In addition, the substitution is also consistent with Piazza-Georgi (2002) study arguing that since individuals only have limited time available, investments in human capital leads to loss in social capital.

The third use is a neutral one. A neutral use is one in which no interplay takes place between capital forms. In other words, the capital forms are neither complementary nor substitute for one another. This use reflects the ‘more capital is better’ assumption that has implicitly underpinned in the traditional ‘access’ approach (Davidsson and Honig, 2003).

A ‘use’ approach suggests the independent effects must be analyzed together with the interplay among the capitals in order to provide an understanding of how each potentially serves as complementary and substituting mechanisms. Following a ‘use’ approach, we argue that the effect of social capital depends on both financial and human capital.

Hypothesis 4: The association of social capital and the entry to nascent entrepreneurship is moderated by financial capital.

Hypothesis 5: The association of social capital and the entry to nascent entrepreneurship is moderated by human capital.

Gender differences
Gender differences are increasingly the subject of discussions in entrepreneurship research. Most gender research in entrepreneurship is trying, from different theoretical perspectives and angles, to explore and understand if, and how if so, females adapt practices throughout the entrepreneurial process that are different from those of males. Bird and Brush (2002) suggest that the literature on new venture creation is often “cast within a masculine gender framework” (p. 41), highlighting the question of if, and how if so, females are disadvantaged as entrepreneurs as one question of particular interest. A large proportion of this gender differences research stream deals with the three capitals.

With regard to financial capital often essential for starting a business, prior empirical research suggests that women might be at a disadvantage compared to men due to lower income or less accumulated personal savings (Bhide, 1992). Research also suggests women entrepreneurs often use different financial strategies than men, and that such strategies may have a limiting influence on their entrepreneurial efforts (Carter and Rosa 1998). For example, despite sharing similar funding perceptions, evidences suggests that women tend to draw from personal savings and establish loans with friends and family to a greater extent than men (Brush, 1991), which could have a limiting impact on the scale of growth efforts.

Human capital research also clearly suggests men and women enter entrepreneurship with different human capital (Brush, 1992). For example, some find that women entrepreneurs have less education than men (Boden and Nucci, 2001) though others find that women entrepreneurs have similar or higher education levels (Cowling and Taylor, 2001). Research clearly suggests women entrepreneurs also have different professional experiences before they enter the entrepreneurial process than their male counterparts. Prior empirical studies show that women often have less well paid job before they become self-employed (Boden and Nucci, 2000), in different areas and often less helpful future self-employment (Fischer, Reuber,
and Dyke, 1993), and are less likely to have start-up experience (Cromie and Birley, 1992) and industry experience (Fischer, Reuber, and Dyke 1993).

Finally, with regard to social capital there also seem to be gender differences. Although empirical results remain inadequate for drawing robust conclusions, some common themes have emerged. The most strongly observed difference is that female entrepreneurs seem to have a higher proportion of female contacts in their social networks compared to their male counterparts (Cromie and Birley, 1992). Female entrepreneurs also appear to rely more heavily on family relations (Schenkel and Matthews, 2009). Due to these prior gender differences, we expect that the association between financial capital, human capital, social capital, their combinations, and the entry to nascent entrepreneurship varies across gender.

*Hypothesis 6: The association between financial capital, human capital, social capital, their combinations, and the entry to nascent entrepreneurship varies across gender.*

**Methodology**

**Data and Sampling Method**

The data for this study were collected as part of the international project, Global Entrepreneurship Monitor (GEM). GEM was initially launched in 1999 with ten participating countries and each year the number of participating countries has grown. Participating nations complete an annual GEM National Population Survey. The survey engages a minimum of 2,000 randomly selected adult respondents who are asked a variety of questions regarding both their engagement and attitude towards entrepreneurship. The goal of the GEM project is to examine how entrepreneurial activity varies across countries; what makes a country entrepreneurial; and how entrepreneurial activity affects a country’s rate of economic growth and prosperity.

The GEM project has generated an extensive database on a wide range of issues and factors germane to entrepreneurship worldwide. Its use in this study is compelling for two
reasons. First, the underlying data collection method of the GEM project is to collect information from a nationally representative sample of adults in various countries. Though some degree of difference in respondent accessibility and small sampling variations do exist, the overall number of participating countries does enhance the generalizability of research based on its use, and particularly for questions focusing on the nascent stages of the new venture creation process.

The total number of useable GEM respondents in the 41 participating countries over three years (that is, 2002-2004) is 203,501 people. Approximately five percent, or 9,257 individuals, were classified as entrepreneurs. In 2003, the countries involved counted for 90 percent of the world’s GDP and covered 60 percent of the world’s population (Klyver, 2008). There is a contentious discussion in the entrepreneurship research concerning the definition and operationalization of entrepreneurship. Focusing on individuals’ entry to nascent entrepreneurship, we follow the emergence perspective (Gartner, 1993). Table 1 presents the variables employed in this study and their respective coding.

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Insert table 1
----------------------------------

**Analytical strategy**

Data analysis utilized descriptive analysis followed by hierarchical logistic regressions in order to test the hypotheses. Control variables - gender, year of survey and country - were included to establish a baseline model (model 1 in regression results) though the coefficients for year of survey and country are not reported in the tables. The main effects of financial, human and social capital were added next in model 2 and interaction effects in model 3. The interaction effects in model 3 test whether gender differences prevail on the effects of financial, human and social capital on individuals’ likelihood to entry nascent entrepreneurship on a sample containing both men and women. The interaction effects in model 4 test,
regardless of gender, the combined effects of the three capitals on individuals’ likelihood to entry nascent entrepreneurship. Finally, the interaction effects in model 5 and 6 test respectively the combined effects of capitals on individuals’ likelihood to entry nascent entrepreneurship for men (model 5) and for women (model 6). The omnibus tests of model coefficients are significant for all models in all tables, indicating that there is an adequate fit between data and the model. Nagelkerke $R^2$ was employed as a measure of variance explained. The Nagelkerke $R^2$ increases successively going from model to model with the highest increase between model 1 and model 2 in all tables.

**Empirical results**

Table 2 reports variable means, standard deviations and zero-order correlations among the variables in our study. The dependent variable, nascent entry decision, is significantly positive correlated respondent age. Those individuals between 30 and 49 years old were compared to those younger than age 30, with respondents’ household income, education level, prior start-up experience, self-efficacy, and respondents having entrepreneurs in their networks. A significant negative correlation prevails with respondents being females. The highest correlation among the variables is 0.300, a finding which suggests multicollinearity is not a threat to the interpretation of the findings.

To what extent does human, financial, and social capital each influence the decision to create a new venture independently? Table 3 (model 1-3) presents the hierarchical logistic regression predicting individuals being nascent entrepreneurs in the full sample. Model 1 shows that females are significantly less likely than males to enter the new venture creation process (p<0.001). It also shows that individuals between 30 and 49 years old are significantly more likely (p<0.001), whereas individuals 50 years old and older are less likely to enter the
new venture creation process, than individuals below 30 years old (p<0.001). Model 2 shows that financial capital in the form of household income has a significant negative impact on individuals’ likelihood to enter nascent entrepreneurship. Individuals in the middle 33 percentile household income (p<0.05) or in the highest 33 percentile household income (p<0.001), compared to those in the lowest 33 percentile, are less likely enter the new venture creation process. The negative correlation is, however, strongest for individuals belonging to the highest 33 percentile. Thus, hypothesis 1 is not supported.

Turning attention to human capital, education level, prior start-up experience, and self-efficacy are all significantly positively correlated with individuals being nascent entrepreneurs. Possessing some secondary (p<0.05), secondary (p<0.01), post secondary (p<0.01) or graduate experience (p<0.001) compared to non secondary education is positively correlated with entry into nascent entrepreneurship. The strength of the correlations increase as the level of education increases. Individuals with prior start-up experience are also more likely to entry nascent entrepreneurship (p<0.001), as are individuals with higher self-efficacy (p<0.001). Self-efficacy has the strongest association with individuals being nascent entrepreneurs among human capital variables considered, providing support for hypothesis 2. Similarly, model 2 supports hypothesis 3 in that individuals with entrepreneurial networks are more likely nascent entrepreneurs (p<0.001). We will return to the results obtained in model 3 focusing on the interaction effects when the results regarding gender differences are discussed (hypothesis 6 – models 4 and 5).

Does the influence of social networking on the decision to create a new venture depend upon the level of human and/or financial capital? Model 4 tests whether the association of social capital and entry to nascent entrepreneurship depends on human and financial capital. It
shows that the relationship between having entrepreneurs in one’s social networks and entry to nascent entrepreneurship is not moderated significantly by education level. However, it does show that the relationship is moderated positively by both experience and self-efficacy. Specifically, results show that possessing start-up experience and having entrepreneurs in one’s network weakly differentiates those who enter nascency and those who do not (p<0.001). Results also show that for high self-efficacy and having entrepreneurs in one’s network weakly differentiates between those who enter nascency and those who do not (p<0.001). In sum, results in table 3 show the association between having entrepreneurs in one’s social network and being nascent entrepreneur is moderated by both start-up experience and self-efficacy but not education level, providing partial support for hypothesis 4. Having entrepreneurs in one’s social network and being nascent entrepreneurs does not appear to be moderated by household income. Consequently, hypothesis 5 is not supported.

Are the capital influences proposed to influence the decision to create a new venture consistent across men and women? The present results suggest they are not. Model 5 and model 6 include similar regressions as those outlined in model 4 but on splits samples of men (model 5) and women (model 6). Models 5 and 6, together with the interaction effects in model 3, are employed to test hypothesis 6. Model 3 shows first that the association between start-up experience (p<0.001) and self-efficacy (p<0.05) is stronger for women than for men. The capital interaction effects are compared between men and women in model 5 and 6. Model 5 and 6 show that for men and women, the association between having entrepreneurs in one’s social networks and being nascent entrepreneur is negatively moderated by start-up experience. However, the results suggest a gender difference does exist with regard to self-efficacy as a moderator. Specifically, the association between having entrepreneurs in one’s social networks and being nascent entrepreneur is negatively moderated by self-efficacy for women (p<0.01) but not for men. In short, we found certain gender differences with respect to
the association of capital, its combinations, and the decision to engage in the nascent entrepreneurial. Accordingly, hypothesis 6 received only partly support.

Discussion & conclusion

The purpose of this study was to move the discussion of effects of capital, including financial, human, and social capital, away from only an access approach towards a use approach. We have argued and empirically shown that it is not only the access to resources that matters for entrepreneurial decision-making, but also how these resources combine in their respective use. Previous research taken the access approach has investigated the isolated effects of capitals on different outcome variables. In addition to investigating main effects suggested by the access approach, we added interaction effects of capital on the entry to nascent entrepreneurship. By doing this we moved the discussion away from a narrow and static access approach toward a broader and more dynamic use approach.

Our empirical results concerning the main effects reflective of the access approach failed to offer support hypothesis 1. In contrast, we found support for hypothesis 2 and 3. Specifically, and contrary to what we hypothesized, financial capital was negatively correlated with entry to nascent entrepreneurship. Several reasons may account for this finding. First, individuals with high household income presumably have relatively good jobs that might present positive job challenges and private financial security. Thus, many might simply prefer to stay in their existing jobs. It may be that the positive impact of household income only comes into existence after people already are considering starting a business. At this stage, having personal savings generated through high household income might improve the successful start-up process. Second, we have analyzed a very diverse sample of individuals living in different societies. Although, we have controlled for country differences, the extant literature suggests that financial capital enhance entrepreneurial activities is mainly literature focusing on developed countries. In these countries, entering entrepreneurship is often an
opportunity-based behavior. However, in less develop countries entering entrepreneurship is more often a necessity-based behavior – individuals have no other choices in order to survive. In circumstances where entry necessity-based, it makes sense that the household income would be low as found in this study.

With regard to human capital, we found that education level, start-up experience, and self-efficacy are all positively associated with individuals’ likelihood to enter nascent entrepreneurship. We also found that with regard to social capital, individuals having entrepreneurs in their respective social network are more likely to enter nascent entrepreneurship than those individuals without entrepreneurs in their network are.

Applying the use approach, we investigated how social capital’s association with financial and human capital variables moderated entry to nascent entrepreneurship. For the full sample (both men and women), we found that the benefit with regard to the entry decision of belonging to a network with entrepreneurs prevails regardless of individuals’ level of education and household income. The level of education and household income neither reduced nor increased the benefits of belonging to an entrepreneurial network.

However, belonging to a network with entrepreneurs is less beneficial if an individual has start-up experience or if the individual is comfortable with their own start-up capabilities. Thus, the benefits obtained from networking are reduced in these situations, likely reflecting the redundancy of resources already possessed. However, the result showing that the benefits of networking are reduced with regard to the entry decision when individuals have high self-efficacy is only true for women. Men seem to benefit from networking regardless of their level of self-efficacy. This suggests that women and men use their network differently. Specifically, it suggests that women potentially increase self-efficacy through role models their networking activities generate, while men do not seem to gain self-efficacy from networking and may search for other resources such as knowledge and capabilities. These results are
consistent with previously research on how women and men interact with other people. Women often are more likely to receive and provide more soft and emotional resources, such as self-efficacy, whereas men are more likely to receive and provide more instrumental resources, such as knowledge and experience.

Collectively, the present study reinforces the importance and need for research that focuses on understanding how exploring capital specificity can lead to new insights into the evolutionary aspects of the venture creation decision (Mosey et al., 2007), thereby moving away from a more traditional static focus on independent influences and toward a focus that is more dynamic and focused on interactive influences. To early stage entrepreneurs, this study implies that the value or benefit of obtaining different resources from networks depends on whether or not these resources are already available to the individual and whether the individual are capable of making use the resources.

Although the current study benefits from the use of representative sampling and the inclusion of participants in 41 countries, we acknowledge two major limitations. The first limitation is that the study includes single item measures of concept such as experience, self-efficacy and entrepreneurial network that would benefit from a more sophisticated measurement using a multi item measure. A second limitation of the study is that in the absence of a longitudinal design it is impossible to rule out a reversed causation explanation for some of our findings. For instance, we found with regard to human capital that people who report self-efficacy are more likely to be nascent entrepreneurs themselves, with the inference having self-efficacy enhance the entry decision. However, it may be the case that having entered nascent entrepreneurship simply increases the odds of having self-efficacy. Thus, a clear antecedent variable cannot be identified.

____________________
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and human capital, cognitive theory, and entrepreneurship policy. His has published his research in several international peer reviewed journals and his research has been nominated several awards.

Mark T. Schenkel is an Assistant Professor of Entrepreneurship at Belmont University in Nashville, Tennessee (USA). His teaching and research interests include human and social capital, entrepreneurial cognition, opportunity recognition, strategic decision-making, and corporate entrepreneurship.

References


Table 1: Dependent and independent variables

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nascent entrepreneur</td>
<td>Nascent entrepreneur was coded 1 for ‘Yes’ and 0 for ‘No’. Respondents were coded 1 (yes) if they alone or together with others actively are trying to start a new business they at least will own part of.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Gender was coded 1 for males and 2 for females.</td>
</tr>
<tr>
<td>Age</td>
<td>A respondent’s age was recoded using two indicator variables – one for the age group between 30 and 49 years old and another for the age group at least 50 years old, with a reference group of younger than 30 years old</td>
</tr>
<tr>
<td>Household income</td>
<td>In each country the household income is calculated so that respondents can be divided into those belonging to the lowest 33 percentile (coded 1), those belonging to the middle 33 percentile (coded 2), and those belonging to the highest 33 percentile (coded 3).</td>
</tr>
<tr>
<td>Education</td>
<td>A respondent’s completion of a higher education was coded 0 for ‘None’, 1 for ‘some secondary’, 2 for ‘secondary degree’, 3 for ‘post secondary’, and 4 for ‘graduate experience’.</td>
</tr>
<tr>
<td>Prior start-up experience</td>
<td>This binary variable is based on the ‘Yes’ (coded 1) or ‘No’ (coded 0) answer to the following question: Are you, alone or with others, currently the owner of the company you help manage, self-employed, or selling any goods or services? The company they help manage have no export.</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>This binary variable is based on the ‘Yes’ (coded 1) or ‘No’ (coded 0) answer to the following question: ‘Do you have the knowledge, skill and experience required to start a new business’</td>
</tr>
<tr>
<td>Entrepreneurial network</td>
<td>This binary variable is based on the ‘Yes’ (coded 1) or ‘No’ (coded 0) answer to the following question: “Do you personally know someone who started a business in the past two years”.</td>
</tr>
<tr>
<td>Year of survey</td>
<td>Dummy variables were created for each the three years: 2002-2004.</td>
</tr>
<tr>
<td>Country</td>
<td>Dummy variables were created for each the 41 countries.</td>
</tr>
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</table>
Table 2: Descriptive statistics: Mean, standard deviation and correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nascent entrepreneur</td>
<td>.046</td>
<td>.208</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>1.51</td>
<td>.500</td>
<td></td>
<td>-0.061**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3. AgeMid</td>
<td>.433</td>
<td>.495</td>
<td>.045**</td>
<td>.020**</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>4. AgeOld</td>
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<td>.474</td>
<td>-0.074**</td>
<td>.002</td>
<td>-0.627**</td>
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<td></td>
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</tr>
<tr>
<td>5. Household income</td>
<td>1.937</td>
<td>.796</td>
<td>.030**</td>
<td>-0.101**</td>
<td>.142**</td>
<td>-0.104**</td>
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<tr>
<td>6. Education</td>
<td>2.066</td>
<td>.983</td>
<td>.054**</td>
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<td>.082**</td>
<td>-0.122**</td>
<td>.275**</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Prior start-up experience</td>
<td>.138</td>
<td>.345</td>
<td>.179**</td>
<td>-0.114**</td>
<td>.088**</td>
<td>-0.029**</td>
<td>.121**</td>
<td>.055**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Self-efficacy</td>
<td>.45</td>
<td>.497</td>
<td>.182**</td>
<td>-0.185**</td>
<td>.084**</td>
<td>-0.059**</td>
<td>.150**</td>
<td>.140**</td>
<td>.300**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9. Entrepreneurial network</td>
<td>.37</td>
<td>.483</td>
<td>.134**</td>
<td>-0.119**</td>
<td>.068**</td>
<td>-0.154**</td>
<td>.144**</td>
<td>.114**</td>
<td>.162**</td>
<td>.254**</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * p<0.05; ** p<0.01;
Table 3: Logistic regression predicting being an entrepreneur

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Base model (Men+Women)</th>
<th>Model 2 Main effects (Men+Women)</th>
<th>Model 3 Interaction effects (Men+Women)</th>
<th>Model 4 Interaction effects (Men+Women)</th>
<th>Model 5 Interaction effects (Men)</th>
<th>Model 6 Interaction effects (Women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-0.614***</td>
<td>-0.255***</td>
<td>-1.247*</td>
<td>-0.256***</td>
<td></td>
<td></td>
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<tr>
<td>AgeMid (Men+Women)</td>
<td>0.124***</td>
<td>-0.111***</td>
<td>-0.113***</td>
<td>-0.111***</td>
<td>-0.173***</td>
<td>0.009</td>
</tr>
<tr>
<td>AgeOld (Men+Women)</td>
<td>-0.719***</td>
<td>-0.722***</td>
<td>-0.718***</td>
<td>-0.715***</td>
<td>-0.761***</td>
<td>-0.608***</td>
</tr>
<tr>
<td>FINANCIAL CAPITAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household income</td>
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<td></td>
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<tr>
<td>Middle tile</td>
<td>-0.070*</td>
<td>-0.218*</td>
<td>-0.068</td>
<td>-0.117*</td>
<td>-0.197**</td>
<td>-0.119</td>
</tr>
<tr>
<td>Highest tile</td>
<td>-0.174***</td>
<td>-0.211*</td>
<td>-0.165***</td>
<td>-0.197**</td>
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<td>HUMAN CAPITAL</td>
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<tr>
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<tr>
<td>Some secondary</td>
<td>0.575*</td>
<td>-0.399</td>
<td>0.983*</td>
<td>0.480</td>
<td>1.946*</td>
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<tr>
<td>Secondary degree</td>
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<td>-0.149</td>
<td>1.192**</td>
<td>0.683</td>
<td>2.171*</td>
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</tr>
<tr>
<td>Post secondary</td>
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<td>-0.106</td>
<td>1.244**</td>
<td>0.813</td>
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<td>-0.030</td>
<td>1.416**</td>
<td>0.953*</td>
<td>2.331*</td>
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</tr>
<tr>
<td>Prior start-up experience</td>
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<tr>
<td>Self efficacy</td>
<td>0.915***</td>
<td>0.354***</td>
<td>1.310***</td>
<td>1.198***</td>
<td>1.459***</td>
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<td>SOCIAL CAPITAL</td>
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<tr>
<td>Entrepreneurial network</td>
<td>0.689***</td>
<td>0.703***</td>
<td>1.857***</td>
<td>1.471*</td>
<td>2.519*</td>
<td></td>
</tr>
<tr>
<td>Gender*education (ref is none)</td>
<td></td>
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<tr>
<td>Gender*some secondary</td>
<td>0.709</td>
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<td>Gender*secondary degree</td>
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<td>0.663</td>
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<tr>
<td>Gender*post secondary</td>
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<tr>
<td>Gender*middle tile</td>
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<td>-0.804</td>
<td>-0.505</td>
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<tr>
<td>Netw* Experience</td>
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<td>-0.594***</td>
<td>-0.509***</td>
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<tr>
<td>Netw*self-efficacy</td>
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<td>-0.112</td>
<td>-0.295**</td>
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<tr>
<td>Netw*Household income (ref is lowest 33 percentile)</td>
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<tr>
<td>Netw*middle tile</td>
<td>-0.011</td>
<td>-0.030</td>
<td>0.025</td>
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<td>Netw*highest tile</td>
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Note: * p<0.05; ** p<0.01; *** p<0.001. The variables ‘Year of survey’ and country are not reported.
Looking for a Better Tax Design to Reduce Regulatory Burden of Small Business in Pakistan

Najeeb Memon, The Australian School of Business, University of New South Wales Sydney.

Abstract

Income tax imposes high compliance costs on small business in developing countries. As a result, small businesses tend to operate informally and consequently deprive an economy of their innovative contributions. The government also fails to generate lawful revenue. Thus, Presumptive Income Tax (PIT) is recommended in order to reduce compliance burden and collect optimum revenue. PIT creates a win-win situation for both small businesses and the government. Whether PIT has achieved this aim in real life is yet unclear. The analyses of the Pakistani PIT in this regard finds that being turnover-based design it has been failed to reduce compliance burden and collect optimum revenue.

1. INTRODUCTION

The high compliance cost of income tax, which arises from the requirement of bookkeeping and the complex tax code, is a problem in its implementation in developing countries (Tanzi, 1991, p.205). Small businesses, which are often referred as an engine of economic growth, find it difficult to cope with its compliance requirements. Such difficulties discourage small businesses to register with tax authorities and operate in the formal sector (IFC, 2007). Therefore, most small businesses operate informally under a constant fear of being caught, and cannot achieve the benefits of the formal sector. Additionally, such small businesses are unable to contribute to the economic growth of country.

Small businesses in developing countries usually operate on a much smaller scale than ‘small’ businesses in developed economies which makes income tax implementation more difficult in developing countries Even the use of simplified regular income tax
regimes may not help, because such regimes still require maintenance of accounts, which is a prerequisite for determination of income. Consequently, compliance costs remain high.

Therefore, designing an optimal income tax regime for small business, which constitutes a major component of informal economy, is a hard task (Stern and Barbour, 2005, p.4). There are international initiatives suggesting taking into account the needs of small business in order to facilitate their integration into formal sector (OECD, 2004). The driving concept behind these initiatives is ‘Think Small First’ (European Union, 2006).

As a result, policy makers are justified in looking for proxies of income which are easy to determine and can reduce the compliance costs. These drastic departures may encourage small businesses to move to the formal economy and avail benefits of operating formally such as access to finance (Stern and Loeprick, 2007, p.11). This will also allow tax authorities to tap tax potential of small business sector (Alm et al, 2003, p.48). This is a win-win situation both for tax authorities and small business.

When proxies of income are used to collect income tax, this tax is called Presumptive Income Tax (PIT). On recommendations of donor agencies such as the World Bank, PIT is being used in most developing countries across the world to tax small business in large informal economies (Engelschalk, 2005, p.2).

However despite its massive use and theoretical superiority, there is no evidence that whether PIT helps small business to comply by reducing its costs or not. Therefore, this paper analyses Pakistani PIT regime for its ability to reduce compliance burden and revenue collection.
The paper proceeds as follows. Part 2 reviews literature regarding tax compliance costs for small businesses. This part also mentions that how tax administration view small business in terms of their compliance. Finally, this part suggests PIT as a sensible compromise between these two players of revenue administration. In Part 3, Pakistani PIT system is analysed for achieving the compromise. Lastly, Part 4 concludes this paper.

2. HIGH COMPLIANCE COSTS: A LOSS FOR SMALL BUSINESS AND TAX ADMINISTRATION

Regarding tax as a burden on small business, both tax authorities and small business generally have conflicting positions, which need to be reconciled on logical basis. A brief in this regard follows below.

2.1 Small Business and Income Taxation

Tax is considered as a major barrier to small business operations in many countries because it is the only interface small entrepreneurs have with the government (Stern and Barbour, 2005, p.4). When compared to other taxes, income tax is commonly blamed for the hardships faced by small businesses, because many small businesses fall outside the ambit of indirect taxes. For example, in Pakistan, 84% of enterprises have annual sales below PKR 0.5m (see Khawaja, 2006, p.2) (equivalent to A$8,000) which is within the exemption threshold of General Sales Tax (GST).

For small businesses, the income tax compliance burden is considered as a strong demotivating factor to comply with tax requirements. Many studies approve this view. For example, in Bulgaria, small businesses consider tax burden as a major impediment in their expansion. In New Zealand, 41% of total compliance costs are
linked to tax compliance (KPMG, 2006, p.35). Similarly, in Pakistan, 67% of small businesses perceive tax regulation as the most problematic in carrying out business activity (SMEDA, 2006, p.7). Even some statistical studies confirm a positive correlation between taxation and the informal economy (Schneider, 2000).

Moreover, the impact of compliance costs is higher on small businesses because small businesses face ‘inverse economies of scale’ in relation to these. It takes an equal amount of time to register and pay income tax on profits of $1 million as it does for $100 (Stern and Barbour, 2005, p.3). In other words, compliance costs are regressive and put a disproportional burden on small businesses (see IFC, 2007, p.3; Evans, 1996, p.2; Sandford and Hasseldine, 1992). A study for Slovenia found that compliance costs are 0.08% and 3.73% of gross turnover for large and small businesses respectively (Klun and Blazi’C, 2005, p.418). For regressivity of tax compliance costs, small businesses are more vulnerable to suffer by them.

For detailed discussion, the taxation burden for small business is bifurcated into the administrative and technical compliance costs (OECD, 2001, p.3).

2.1.1 Administrative Compliance Costs: Administrative compliance costs are defined as costs borne by taxpayers that are over and above the tax liability and costs arising from tax related economic distortions (Sandford, 1995). These costs primarily arise from complying with administrative rules and include reporting compliance such as book keeping (OECD, 2001, p.3).

A complex tax system, which increases the costs to comply statutory obligations, is regarded as ‘one of the main reasons’ towards non-compliance and to operate in the
informal sector (Schneider and Hametner, 2007, p.8). Shome (2004, p.6) also holds that high administrative compliance costs discourage businesses to become formal.

More specifically, Khawaja (2006, p.9) argues that cost constraints related to maintenance of accounts and to hire a tax agent makes tax compliance quite difficult for small businesses. He further mentions that maintaining accounts by sole proprietors of small business is beyond their capacity because they do not have sufficient accounting skills. More simply, small businesses, which are already struggling to survive, are reluctant to maintain financial accounts (SMEDA, 2005, p.13) and prefer to remain informal.

Cuccia and Cames (2001, p.133) however, disagree by arguing that compliance behaviour of taxpayers is driven by the economic benefits of operating informally, rather than the complexity of the tax system. Thus, in the case where a complex provision yields benefits, the taxpayer would comply with it. In contrast, a simple provision which does not provide an economic benefit would not be complied with. However, this latter view may not be true for small businesses which neither have the knowledge nor resources to capitalize on complex tax saving provisions in tax code.

A number of studies have been conducted to identify the constituents of administrative compliance costs in developed countries. However, the analysis of administrative compliance costs is scant in developing countries. A study in Malaysia found bookkeeping, both in terms of time and money spent, to be the major compliance cost in personal income taxation (Sapiei and Abdullah, 2008, p.228). In India, a recent study identified audits, book keeping and return filling as the highest of all compliance costs (Das Gupta, 2001). Another study in India in respect of personal income tax revealed that ‘record keeping and advisors fees form the bulk of costs for
non-salaried individuals’ (Das Gupta, 2003, p.10). In terms of total income, compliance costs are equivalent to 6.8% of gross income of non salaried taxpayers (Das Gupta, 2003, p.10). More specifically, record keeping, in terms of ‘time compliance’ costs, was Rs.27000 per annum for non-salaried taxpayers (Das Gupta, 2003). Further, the compliance costs were double the tax liability itself and these costs for non-salaried persons are 7-10 times higher than those of salaried persons (Das Gupta, 2003)

Moreover, the compliance burden arising from administrative requirements is relatively higher for small businesses in developing countries than the developed ones. For example, the free record keeping software offered by tax agency in Australia is relatively very expensive for small businesses in developing countries, because such software requires computer systems and an operator (National Audit Office Report, 2008). More aptly, the cost of a computer (i.e. approx $1000) is proportionately very high for a small business of Pakistan with turnover of approximately $6,000, than a micro business of Australia with turnover 2.0 million. It is reported as a significant hurdle for small business in Australia (Board of Taxation report, 2007, p.57).

To put it differently, a taxpayer in a developing country, for example in Pakistan falling in the lowest taxpaying bracket (i.e. taxable income of PKR 100,000 to 110,000 (equivalent to A$1,571)) is liable to pay tax rate of 0.5%. The resulting tax liability stands at approximately PKR550 (A$8). Even up to taxable income of PKR 300,000 (equivalent to A$4,286) the tax payable stands at PKR 15,000 (equivalent to A$214), which is less than the cost of keeping accounts. The cost of tax agents to file

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1 Under Rule 29 and 30 of Income Tax Rules of 2002 (Pakistan), every taxpayer having income from business and profession is required to keep books of accounts. Taxpayers above income of PKR 200,000 (equivalent to A$2857) are required to keep cash book and ledger and other records.
the tax return is over and above the bookkeeping cost. Even in Australia, with high literacy rates, 95% of small businesses file income tax returns through tax agents because of the perception that lodgement of returns require specialist knowledge (Board of Taxation Report, 2007).

More simply, the impact of compliance costs depends on the level of turnover and income which varies a country to country. Therefore, small businesses in developing countries, due to their low turnover, should be subjected to less administrative compliance burden.

Besides the above, a high compliance burden influences tax morale which is a driving force for tax compliance. ‘Tax morale’ is the intrinsic motivation to pay taxes (Schneider and Torgler, 2007a, p.12), and evolves from the perception of individuals about the social, political and economic system. With this in mind, when small businesses are required to maintain accounts at a cost equivalent to 7% of their income, which is even higher than the tax liability in many occasions, it is naïve to expect voluntary compliance.

2.1.2 Technical Compliance Costs: These types of costs are primarily those which arise from payment of taxes computed in accordance with the provisions of tax code (OECD, 2001, p.3). The burden arising from high tax rates has a direct bearing on well being of small business.

Studies show that the tax rates influence the decision of a small business to operate formally or informally. Cebula (1997) found that if the marginal personal income tax rate increases by one percentage point, the shadow economy rises by 1.4 percentage
points. Consequently, there is a strong case for low tax rates in a tax system for small business.

2.2 Government’s View of Small Business Compliance

Tax authorities in developing countries consider non compliance by small business dominated informal sector as a major hurdle in revenue collection. The average size of the informal economy in Africa, Asia, South America, the OECD and transitional European countries is 41%, 26%, 41%, 18% and 38% respectively (Schneider, 2000). Tax administrators use the informal economy estimates as a proxy for hard-to-tax taxpayers (HTT) (Alm et al, 2003, p.4). Small businesses constitute major part of the informal economy and inter alia, the HTT sector (see IFC, 007, p.3; Alm et al, 2003, p.4).

The level of noncompliance by small business can also be gauged by comparing the total number of businesses with the registered ones in a country or by comparing the registered businesses with the total population. For example, in Rwanda, out of 70,000 micro and small enterprises, only 1,000 are registered with the tax authority. In Philippines, registered VAT taxpayers constitute 0.32% of the total population (IFC, 2007, p.5).

In view of the above, tax administrators believe that a large component of total economy escape taxation in the form of the small business sector (Taube and Tedesse, 1996, p.3), and such non-compliance deprives the state of lawful revenue (Alm et al, 2003, p.20). The low direct Tax to GDP ratio in developing countries as compared to developed ones evidently endorses this view. For instance, direct tax to GDP ratio is 7% in the sub-Saharan but 22% in industrial countries (Auriol, 2005, p.626).
As a result, tax administrations in some developing countries have resorted to more stringent enforcement measures such as high penalties. However, persistence of large informal sectors there show that such a strategy has been failed. Moreover, a large group of studies (such as Alm et al, 1992, p.12) disagrees with Allingham and Sandmo’s (1972, p.337) view that non-compliance is negatively correlated with the probability of detection. This is evident by high compliance level in developed countries, despite the low level of deterrence. Fjeldstad (2003, p.24) also states that it has proven difficult to apply the tax law with full force in the developing countries. Therefore, from the tax administration perspective also, measures of improving tax compliance through reducing the tax burden may have more value than stringent enforcement.

2.3 Use of PIT: A sensible Compromise

Keeping in mind the facts discussed in Part 2.1 and Part 2.2, it is inferred that it is ‘just not possible’ to tax small taxpayers for actual income in developing countries (Tanzi and Casanegra, 1987, p.15; Makedonskiy, 2005, p.4), because the high compliance costs linked with the bookkeeping discourages small business to keep them (Yitzhaki, 2006, p.10).

Further, the principle of cost effectiveness in financial reporting, which says that ‘the financial information should not be obtained at a cost higher than the value of the decision under consideration’, supports small business’s decision of noncompliance (Atrill, 2002). This decision may appear logical particularly when cost of keeping accounts for determination of income is higher than tax liability and accounts are not needed for any other purpose.
Further, small businesses even under the regular regime do not maintain accounts and therefore often suffer adverse consequences of amended assessment if selected for audit (IFC, 2007, p.57). Moreover such amended assessments are a form of administrative PIT based on some production and outward indicators. Moreover, such an evidence of non maintenance of accounts also suggests ‘the elimination of book keeping associated with regular tax (Faulk et al, 2006, p.13)’. More simply, small business should be exempted from maintaining accounts in order to reduce the compliance burden (Christian and Jaramillo, 2004, p.3).

PIT in such a situation can have dual advantages. First, it shall collect some revenue, which otherwise might not have been possible and consequently create a perception of fairness in a tax regime. Second, it may save small businesses from undue time, psychological and monetary costs of compliance and give them a feeling of being governed fairly.

In view of the above, income tax need not to be applied to a well defined and precisely measured concepts of the income (Tanzi and Casanegra, 1987, p.1; Slemrod and Yitzhaki 1994, p.32). On the contrary, the potential source of revenue of small taxpayers may be harnessed by simplifying income tax to greatest possible extent (Shome, 2004, p.7). Policy makers are therefore justified to use PIT, which will reduce compliance costs and help the tax administrators to collect revenue. These drastic deviations are also acceptable for encouraging small business to operate formally and help in economic growth (Stern and Loeprick, 2007, p.2). PIT is endorsed as an alternative under the premise that ‘near enough is good enough’ for the successful implementation of income tax (Burn, 2003, p.217) and promoting growth through facilitating small business.
However, the use PIT for small business in developing countries should be subject to two conditions. First, some businesses even small due to their specific characteristics such as ability to keep a record of their activities should be excluded from PIT regime (Engelschalk, 2005 p.11, 13). For examples, accounting firms, drug stores and foreign exchange dealers, etc. Second, PIT may be allowed in the short to medium term ‘as a stepping stone’ (Wallace, 2002, p.1) and subsequently transition to ideal regular tax (Shome, 2004, p.17) be supported for meeting most of principles of a good tax.

3. DOES PIT IN REALITY ACHIEVE THOSE OBJECTIVES IN PAKISTAN

As mentioned earlier, on recommendations of donor agencies such as the World Bank, PIT is being used in most developing countries across the world to tax small business (Engelschalk, 2005, p.2). However despite its massive use, there is a no confirmation that whether PIT achieves earlier win-win situation. Engelschalk (2005, p.27) argues that PIT designs in many countries are not easy to comply and therefore have high compliance costs. Whether this is true in respect of author’s home country’s PIT legislation or not, this paper analyses Pakistani PIT regime for its ability to reduce compliance burden and revenue collection.

3.1 Pakistani PIT for Informal Sector

The Income Tax Ordinance of Pakistan 2001\(^2\) contains a number of PIT provisions, which tax professional and business income of both non-corporate entrepreneurs and corporate entrepreneurs. Most small businesses in Pakistan are non-corporate entities, which are required to comply with more than one of these provisions depending upon the nature and scope of their activities.

\(^2\) The bare legislation is available at [www.fbr.gov.pk](http://www.fbr.gov.pk).
A summary of these provisions is given below.

3.1.1 Sections 153, 156A, 234, 234A and 205 read with Section 169

The receipts of small business from supply of goods\(^3\), execution of contracts\(^4\), provision of services\(^5\), sale of compressed natural gas (CNG) & petroleum products and brokerage & commission is liable to withholding tax under s 153, 234A, 156A and s 205 respectively. The tax so deducted is final discharge of tax liability under legal PIT enacted through the deeming provisions which are contained in the section 169(1).

Any taxpayer with these activities is only required to file a single page statement along with the ‘certificate of WHT deduction’ or ‘tax payment receipt’ under ss 115(4). This regime also does not envisage maintenance of accounts by taxpayers and tax audit by tax administrator.

However, it is noted that linking PIT with WHT has complicated the compliance requirement for the following reasons. First, since corporations, registered firms and Associations of Persons (AOPs) are the statutory WHT agents hence only those transactions of small business can suffer from withholding tax which are executed by them with the WHT agents. Thus, small business usually transact with each other (i.e. informal sector) to avoid withholding tax and consequently being taxed under PIT regime.

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\(^3\) Section 153 (9) provides that in this section “sale of goods” includes a sale of goods for cash or on credit, whether under written contract or not

\(^4\) No definition is provided in the tax code, which is the centre of ambiguities in the regime

\(^5\) Section 153 (9) provides that in this section, – “services” includes the services of accountants, architects, dentists, doctors, engineers, interior decorators and lawyers, otherwise than as an employee.
When small business does not transact with the WHT agents (who predominantly operate in the formal sector), then it does not suffer from WHT and consequently fall within the ambit of regular tax. Under regular regime, small business is required to file their return under s 114 and is assessed in Universal Self Assessment Scheme (USAS) under s 121. A return filed under s 114 is liable to audit and small business has to prove the veracity of the declared version by keeping the accounts. Consequently the taxpayer is exposed to all complexities of ITO 2001 and the compliance costs increase enormously, which discourage compliance.

Second, when only a part of transactions of a taxpayer suffer WHT and fall within PIT, then his/her remaining transaction are taxable the regular regime. In this scenario operating expenses would be apportioned to each of its parts for determination of taxpayer’s profits. The allocation method is prescribed in s 67 read with Rule15 of Income Tax Rules 2002.

The method of allocation of the costs requires the accounting information of business. Consequently, such a taxpayer has to keep accounts for both of its activities. Moreover a taxpayer with hybrid activities has to file both a return and a statement and is also liable to audit by tax authorities.

3.1.2 Sections 148 and 154 read with Section 169

When a person makes commercial imports and exports its receipts are going to be subjected to the WHT under s 148 and s 154 respectively. The Customs Department and banks are the WHT agents for this most documented economic sector. The tax so deducted is final discharge of tax liability under legal presumption, which is enacted through a deeming provision contained in ss 148(7), 154(4) and 169(1).
For incomes from any of these activities, a taxpayer is only required to file a single page statement along with a ‘certificate of WHT deduction’ or ‘tax payment receipt’ under ss 115(4). This regime does not envisage the maintenance of accounts by taxpayers and audit by tax authorities.

It is noted that when only part of the transactions fall under any of the preceding WHT based PIT then the taxpayer suffers from similar hybrid tax treatment as mentioned in the preceding section. Consequently the compliance costs increase enormously.

3.1.3 Tax on retailers under Section 113B

Retailers, which are organized as sole proprietor or Association of Persons (AOP), can avail the option of paying tax @ of 0.75 of the turnover (as prescribed in Div. IA of Part I to Schedule I of the Ordinance) under s 113A. Similar retailers having turnover of more than 5.0 million rupees is liable to tax @ of 1% of the turnover under the s 113B. Both payments are the final discharge of tax liability. The retailers are required only to file a statement under ss 115(4).

3.1.4 Widespread WHT Regime

Besides the above withholding taxes, which fall within ambit of PIT regimes, small business is also liable to WHT, when they transact with prescribed WHT agents, in respect of many other activities under various sections of the law such as cash withdrawal, use of electricity and telephone, purchase and registration of motor vehicles.
3.1 Assessment of Pakistani PIT for Reducing Compliance Burden

Since the compliance costs actually reflects the compliance burden, which is to be borne by small income earners of informal economy, hence, this burden must be low to make any tax regime successful in the developing countries. It should be examined in context of the average liability of the small business (i.e. How much is ratio of compliance costs with tax liability). The operational complexity of Pakistani regime is analysed qualitatively in terms of the compliance burden e.g. book keeping and other documentary requirements, the length and the level of computation etc.

Consistent to Part 3.1, mostly small business in Pakistan has to maintain books of accounts\(^6\), because, the probability that all the transactions would fall within ambit of PIT is very low.\(^7\) Taxpayers usually have income from transaction both with the WHT agents and others. Consequently, a taxpayer is required to keep accounts for allocation of expenses, when he/she has two streams of incomes. One stream from an activity which falls within ambit of PIT and another stream from an activity covered under the regular regime. More simply, taxpayer is obligated to maintain the books if his/her more than 20% receipts have not suffered WHT. On the other hand, a taxpayer is also required to keep records for compliance to the regular regime, when his/her all receipts do not suffer any withholding. The only exception, when a taxpayer is not required to keep accounts is when his/her total receipts are subjected to WHT.

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\(^6\) Internal costs on the recording data and acquiring knowledge to comply to tax obligations are virtually all the compliance costs. See Cynthia Coleman and Chris Evans, 'Tax Compliance Issues for Small Business in Australia' in 'Taxing Small Business: Developing Good Tax Policies' (2003) edited by Neil Warren, Australian Tax Research Foundation Conference Series 23, 163. A business perception is also noted that the prime role of the financial statements is tax compliance rather than the financial management (see Chris Evans et al, ‘A report Into the Incremental Costs of Taxpayer Compliance’ prepared for the Revenue Analysis Branch of the Australian Taxation Office (Australian Government Publishing Service Canberra, 1996, 3)). This perception seems more prevalent in small business sector.

\(^7\) It may be, because, only a few business activities are covered under PIT. Moreover transactions with formal sector only suffer WHT, which is a prerequisite to be eligible for PIT. Thus, activities, which do not suffer WHT shall fall outside the ambit of PIT.
For the Pakistani small business under existing PIT regime, compliance cost is increased due to the maintenance of accounts. It is noted that costs of maintenance of accounts takes away large percentage of income earned by a taxpayer. The compliance costs could even be higher than the tax liability itself. For instance, a taxpayer having income at PKR110, 000 (Equivalent to A$1400) under the regular regime has tax liability of PKR 600 (Equivalent to A$8), which definitely is lower than the compliance costs related to book keeping etc. As mentioned in Part 2 the costs of maintenance of accounts in India, whose economy is similar to Pakistan is PKR 27,000 (Equivalent to A$350).

Besides the cost of book keeping, the WHT on various activities (those not covered under PIT) require small businesses (even those who fall under PIT) to interface with tax administrator in order to get the refund of tax withheld on those activities. In absence of electronic refund mechanism, many small businesses do not even apply for the refund due to fear of being harassed by the administration. Some scholars call such withheld taxes as de facto final assessment regimes (Peter, 1994, 533). Thus, the compliance cost increases and a taxpayer may prefer to remain informal.

Additionally, even large formal businesses who transact with the informal sector (which usually do not claim credit of WHT, because, of their shyness of becoming formal) have to bear the burden of WHT, which increases their compliance costs also. Alternatively, they may choose either not to transact with informal business or not comply with WHT regime (As discussed earlier that the compliance to WHT is difficult to monitor), which cause loss of revenue.

Even when the taxpayers’ all receipts suffer WHT, the PIT based on WHT is not simple, as compared to other PIT designs, because, the taxpayers have to keep the
record for turnover throughout the year. Additionally, the taxpayer has to keep the
record of for all types withholding; some of whom are final discharge of tax liability
and some are not. For the later, the taxpayer has to obtain refund from the tax
authorities. The compliance costs are also increased due to the separate treatment for
each class of income. Resultantly, the compliance cost is increased.

The retailers, who fall under non-WHT based turnover tax regime, have to keep the
record of the turnover, which increases the cost of compliance and consumes too
much time of the un-educated entrepreneurs. Moreover, the tax liability is uncertain in
this regime, because, the adjustment for amounts withheld under the WHT is not
allowed under this regime. It means that small taxpayer is not only paying more tax
for the WHT based PIT (the tax deducted at source plus the tax paid as a retailer), but
also bear other WHTs, which are not final discharge of tax liability. More simply, for
the retailers, any tax deducted under WHT regime is the final discharge of tax
liability. Additionally, retailer has to pay the tax under the retailer’s regime.
Consequently, to benefit from the regime the taxpayer has to organize its activities in
such a manner that he/she should bear minimum WHT. But this all increases the
compliance costs.

The PIT regime for rental income is also not useful for the non-compliance problem.
Since the tax on property income is simple even under the regular regime, hence,
subjecting the same to PIT seems not for the purpose of simplicity. The low tax rates
under the PIT for rent earners suggest that it is enacted to favour real estate sector.

Further, the small businesses organized as AOPs and firms are obligated to act as
WHT agent u/s 153 for various payments they make. This role of collecting taxes for
the government increases the costs for small taxpayers in the formal sector, which
may promote informality. The use of WHT regime, therefore, may not be suggested for taxing small business sector (ATO Report, 1998, vii).

On the other hand, the Pakistani PIT is hard to enforce and comply, because, most of the taxpayers either fall in the regular regime or have to face the hybrid treatment. Only small number of taxpayers falls within ambit of PIT, when their total receipts suffer from WHT. Under the regular and hybrid treatments, taxpayers have to keep books. Consequently, neither compliance burden for small business nor the role of weak administration is reduced. Thus, the Pakistani PIT does not address the high compliance burden, which is main cause of informal economy.

The Pakistani regime for retailers is also difficult to monitor. For instance, it is a daunting task to determine turnover of cash-based retailers under the retailer’s regime. Moreover, both the regimes do not have the feature similar to ‘open for auction’ for ensuring the correct declarations (Sadka, 1992, 2). For the same reason, despite the increase in the number of statement filed, tax collection from this sector is not improved in Pakistan (see Table 1).

Table 1
Returns and Collections under Retailers’ Regime

<table>
<thead>
<tr>
<th>Taxpayers</th>
<th>Up to October 2005</th>
<th>Up to October 2006</th>
<th>Up to October 2007</th>
<th>Up to October 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns/ Statements</td>
<td>No. of Returns Received</td>
<td>Tax Paid</td>
<td>No. of Returns Received</td>
<td>Tax Paid</td>
</tr>
<tr>
<td>Other(including Retailers)</td>
<td>36,378</td>
<td>114.43</td>
<td>37,547</td>
<td>131.6</td>
</tr>
</tbody>
</table>


8 An empirical study of compliance cost as to whether these costs are more than the taxpayer’s tax liability may be carried out, in order to confirm this observation empirically.
It is noted that PIT regime based on WHT in a country with weak administration is not recommended because monitoring of WHT is harder than implementing the regular tax due to intricacies in handling the voluminous information. Moreover under this regime, WHT agents assume the role of tax administrator and that too in an environment, where they are not being effectively monitored. It makes the role of a WHT agent evasive and fair implementation of the regime doubtful. Therefore, Pakistan PIT is not easy to enforce.

Lastly, proxy base should be the one which is easy to follow and difficult to temper with (Indira, 1995, 1104). As mentioned in Part 3.1, the Pakistani PIT is basically has a turnover based PIT design and as a consequence has different subtypes for the different categories of taxpayers. There are around ten PIT regimes, which are based on the collection of tax at source mechanisms. Additionally, there is one turnover based regime for the retailers and for the rent income earners. The presence of these categories causes insertion of couple of definitions also. This all adds to the technical complexity in the Pakistani PIT, which along with earlier mentioned high operation costs makes this regime difficult to comply and hard to enforce.

5. CONCLUSION

The literature review suggests that income tax compliance cost is the major contributing factor to overall regulatory burden on small business in developing countries. A PIT system absolves small businesses of maintaining accounts and reduces the compliance cost and therefore helps them to flourish. Instead of PIT being a ‘compromise’ or a ‘second best option’ (Faulk et al, 2006), it is an appropriate alternative to help small businesses to operate formally and contribute to economic growth. On the other hand, a PIT also helps the tax administration to collect optimum
revenue from small business. More simply PIT offers a win-win situation for small business and tax authorities.

Although PIT is being used in most developing countries, there is no confirmation that whether PIT achieves earlier win-win situation. It is argued that PIT designs in many countries are not easy to comply and therefore have high compliance costs. Consequently PIT fails to achieve its given objective. This paper analyses Pakistani PIT regime for its ability to reduce compliance burden and revenue collection.

The findings suggest that the Pakistani PIT being turnover based PIT is easy to comply and is also difficult to monitor. Further, PIT can fully apply when all or most of taxpayer’s receipts suffer WHT hence in most cases small business in Pakistan either fall in regular or hybrid tax regimes. As a result, the compliance burden remains high and level of compliance and revenue collection is low. Whether change of PIT design can help in this regard demands future research.
Bibliography


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Strategic Fit between Regional Innovation Policy and Regional Innovation System: A Case of Local Public Technology Centers in Japan

FUKUGAWA Nobuya

Abstract

Local public technology centers, administrated by local authorities, primarily engage in providing technological support to small local firms and are currently encountered with structural changes in regional innovation systems. This study examines fit between resource allocation strategy of local public technology centers and the characteristics of regional environments. The results show that there are no significant differences between centers’ strategies according to the characteristics of a regional innovation system. This implies that centers' strategies were inefficient because economic welfare in the region would have improved if they had allocated resources in accordance with the characteristics of regional innovation systems.

Keywords: strategic fit, local public technology centers, regional innovation system, small firms, innovation policy

JEL: O38, O33, R11, R58
1. Introduction

Regional innovation system is a conceptual framework where industrial innovations are generated in a region (Howells, 1999; Acs ed., 2000; Cooke et al. eds., 2004). Regional perspectives are important in innovation research in the case where the geographical range of knowledge diffusion is limited due to the tacit nature of the knowledge transferred. This implies that one economic agent in agglomeration benefits from knowledge spillover whereas another in a geographically isolated area does not. Therefore, efficiently designed regional innovation policy that promotes knowledge interactions between the economic agents, i.e., industry, universities, and public organizations, is substantial for knowledge productivity in the region (Fritsch, 2004; Fritsch and Franke, 2004; Ronde and Hussler, 2005). Such regional difference in knowledge productivity, in the long run, will lead to the regional difference in economic development.

Among regional innovation policies that have been implemented in developed countries, the establishment and expansion of local public technology centers in Japan constitute one of the most distinguished policy instruments. Local public technology centers, administrated by the prefectural and municipal governments, primarily engage in providing technological support to small local firms. They were established prior to the initiation of modern economic growth in the nineteenth century, increased over the twentieth century, and now cover all regions and most of the technological categories. Technological services they offer small local firms include inspection of materials and products, guidance in production process, joint research, patent licensing, and so forth. Regional innovation policy represented as local public technology centers was considered by the US government as having made significant contributions to economic growth in postwar Japan, and was benchmarked in designing the regional innovation policy implemented in the 1990s (OTA, 1990; Shapira et al., 1995; Shapira et al., 1996; Feller, 1997).

Although the policy is notable in terms of its history, geographical and industrial coverage of the policy, variety of services the policy offers, and the number of policy recipients, local public technology centers are currently faced with two recent structural changes forcing them to redefine their capabilities and responsibilities in the regional innovation system. First, prolonged economic stagnation since the collapse of the bubble economy in 1990 left the local authorities facing serious financial difficulties. Furthermore, as a result of the structural reform under the Koizumi administration (2001-2006), the local authorities experienced a substantial reduction in subsidies as well as a transfer of authority from the national government. This led the local authorities to cut the budgets of the local public technology centers and rigorously evaluate their performance. In order to allocate budget more efficiently and convince taxpayers to spend their money on a regional innovation policy, the local authorities required local public technology centers to redefine their strength and contribution to the regional economy in a more visible manner. Second, the national system of innovation was fundamentally reformed since 1990s, symbolized by the enactment of the Science and Technology Basic Law in 1995, the Technology Licensing Organization Act in 1998, Special Measures for Industrial Revitalization in 1999, and the semi-privatization of national universities in 2004. A series of reforms involved national universities in the region in knowledge interactions with small local firms; this was in contrast to the case prior to the reforms when they had not been motivated to interact with the regional economy. This change marked the national universities’ entry into the local market of public technological services where local public technology centers were the primary source of knowledge to small local firms.

Under such circumstances, local public technology centers are required to establish their own strategy in line with the characteristics of a regional innovation system. Using a comprehensive dataset on local public technology centers, this study aims to propose a model describing the characteristics of regional innovation systems and quantitatively examine whether centers’ strategies fit with the characteristics of the regional innovation system. Foreshadowing the empirical results, there are no significant differences in the strategies adopted by local public technology centers according to the characteristics of the regional
innovation system. This implies that centers' strategies were inefficient because economic welfare in the region would have improved if they had allocated resources to fit with the characteristics of regional innovation systems.

Although much research effort was invested into the examination of technology transfer from universities in Japan (Kneller, 1999; Yoshihara and Tamai, 1999; Motohashi, 2004), local public technology centers as a source of public knowledge have been received little attention from researchers. Therefore, this analysis should be of interest to researchers interested in technology transfer and regional development as well as policymakers responsible for developing strategies of local public technology centers. The remainder of the paper is organized as follows. Section 2 provides an explanation for local public technology centers in Japan and their policy impact. Section 3 introduces a model describing the characteristics of regional knowledge transfer. Section 4 operationalizes concepts on the strategies of local public technology centers and the characteristics of regional knowledge transfer. Section 5 predicts how these strategies should be established according to the characteristics of regional knowledge transfer. Section 6 shows the results of statistical analyses. Section 7 summarizes the implications of the empirical analysis, discusses theoretical and methodological contributions of the study, and refers to the issues for future research.

2. Local public technology centers and their policy impacts

Local public technology centers, administrated by the prefectural and municipal governments, play three important roles in regional economies. First, they provide small local firms with various technological services, such as inspection of raw materials and final products, consultation to solve problems in production process, and organizing seminars or workshops to diffuse new technologies or process. Second, local public technology centers conduct their own research, patent their inventions, and license their patents primarily to small local firms. Third, local public technology centers link small local firms for the purpose of new product development.

Regional innovation policy represented as local public technology centers has its roots in the 1880s, prior to the initiation of modern economic growth in Japan. Figure 1 illustrates the founding of local public technology centers by year and by technological field. In the early days, local public technology centers were primarily established to support agriculture, the most important industry in pre-modern society. The development of heavy industry after the 1910s was followed by the establishment of an increasing number of local public technology centers to provide technological support to manufacturing. In the 1950s and 1960s, the remarkable economic recovery in postwar Japan led to serious environmental side effects, prompting the creation of local public technology centers for environmental science.

Figure 1 about here

Today, in most prefectures, there are at least two types of local public technology centers providing support in the areas of agriculture and manufacturing. Certain centers offer services in specific fields of manufacturing, such as ceramics, textiles, and mechanical arts. Other centers are engaged in research and technological assistance in the areas of environmental science, industrial design, and civil engineering.

This regional innovation policy, unique to Japan, received attention from the US government in the 1990s since it was recognized to have made significant contributions to the rapid economic growth of postwar Japan. With serious concerns over decreasing competitive advantage in the manufacturing industry, the US government benchmarked local public technology centers in its Industrial Modernization Program (IMP), the regional innovation policy that was implemented in the 1990s (OTA, 1990). To enhance the technological capabilities of small local firms, IMP established public technology transfer organizations such as Manufacturing Technology Centers and Manufacturing Extension Partnerships (Shapira et al., 1995; Shapira et al., 1996; Feller, 1997; Shapira, 2001). Several empirical studies suggest
positive impacts of this policy (Luria and Wiarda, 1996; Oldsman, 1996; Dziezek et al., 1997).1

Although no econometric evaluation of the policy effect of local public technology transfer centers has been carried out to date, several studies suggest that local public technology centers contribute to improving the technological capabilities of small local firms. Shapira (1992), based on interviews with center directors, reports that local public technology centers play an important role in improving product quality and in introducing new technology to small local firms. Comparing the Manufacturing Extension Partnerships in the US with the local public technology centers in Japan, Ruth (2006) argues that the latter are superior to the former in terms of connecting small local firms for the purpose of innovation. Based on a questionnaire survey on such innovative small firm networks, Fukugawa (2006) finds that local public technology centers significantly help such interfirm groups to technologically succeed in joint product development. Others highlight the regional embeddedness of center scientists as one of the advantages of local public technology centers in the regional innovation system. The lifetime employment of center scientists encourages them to be involved in the regional economy and to establish stable and long-term relationships with small local firms, which in turn helps local public technology centers build mutual trust with customers. The low mobility of center scientists tends to result in obsolescence of the technological knowledge that they hold. However, this is not detrimental to the technology transfer productivity of local public technology centers, because most of their customers typically do not engage in development of state-of-the-art technology, and a small lag in knowledge diffusion matches customers' needs for technological know-how (Shapira, 1992; Hassink, 1997).

In brief, these local public technology centers seem to have helped improve the technological capabilities of small local firms. However, as Fukugawa (2008) suggests, resources of the centers may not have been fully utilized as an engine for regional economic development since the technological services offered do not match the characteristics of regional innovation system.

3. Identifying strategies of local public technology centers

To represent resource allocation strategies of local public technology centers, the comprehensive survey on local public technology centers, “Current Status of Local Public Technology Centers 2000-2008” by the Japan Association for the Promotion of Industrial Technology was used. Although this dataset provides information on local public technology centers in all technological categories including agriculture, environmental science, civil engineering, and industrial design, manufacturing technology centers are focused here. Definitions and descriptive statistics of variables are shown in Table 1. All variables are divided by the number of researchers to control for size effect. 2

Table 1 about here

Although local public technology centers engage in various types of activities, these activities can be bundled into several factors representing the tendencies of local public technology centers to reinforce specific resources, i.e., resource allocation strategy. Factor analysis is a statistical method for extracting latent factors behind observable variables that

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1 See Jarmin (1999) for a rigorous policy evaluation of the Manufacturing Extension Partnership. He establishes plant-level panel data and estimates Heckman's selection model to control for firm attributes that are inherent in policy applicants. The results indicate a positive policy impact on the value-added labor productivity of policy applicants.

2 Researchers do not include clerical staff that is not directly involved in technology transfer to the private sector.
affect several observable variables in the same direction. Figure 2 shows the factor loadings computed by factor analysis. Based on the scree plot, the number of factors was assumed to be two; the horizontal axis (Factor 1) and the vertical axis (Factor 2). Factor 1 strongly correlates to variables such as “quality,” “joint and funded research”, “patent,” and “paper” while it has no correlation with other variables. The quality of human resources, research activities, and research outcomes are associated with the research capacity of local public technology centers. Therefore, Factor 1 is presumed to represent the tendency to intensify the research capacity of local public technology centers. In contrast, Factor 2 positively correlates to variables such as “workshop” and “consult” while it has no correlation with other variables. Letting small firms use equipments and consultation primarily aims to provide small local firms with immediate solutions to the problems in production process. Therefore, Factor 2 is presumed to represent the tendency to directly support small local firms by providing immediate solutions for technological problems.

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4. Identifying characteristics of regional innovation systems

In order to identify characteristics of regional innovation systems, this study assumes a local market of public technological services. Previous studies suggest that the characteristics of demand and supply of a local market of public technological services determine how public knowledge is transferred to the private sector (Charles and Howells, 1992; Santoro and Chakrabarti, 2002; Schartinger et al., 2002; Carayol, 2003). Specifically, the type of knowledge linkage established between industry and universities is determined by both attributes of firms (demand-side factors), such as size and R&D intensity, and attributes of universities (supply-side factors), such as incentives and research quality of faculty staff. Based on their arguments, this study assumes a regional market of public technological services where small local firms seek and exploit public knowledge accumulated in the region either to improve their production processes or to build long-term R&D capabilities.

The demand of public technological services in the region is affected by attributes of small local firms. Although there are some regions with large established firms, these firms are likely to have sufficient internal resources to solve technological problems on their own. Furthermore, even if large firms encounter technological difficulties beyond their capabilities, they are unlikely to rely on regional public knowledge for solutions since they are likely to have developed global knowledge networks. The most important demand-side factor is the absorptive capacity of firms, i.e., the capability to assess, assimilate, and exploit external knowledge for innovative activities (Cohen and Levinthal, 1990; Zahra and George, 2002). Absorptive capacity, like human resources, has a cumulative nature and is generated through R&D effort of the firm, which makes it difficult for competitors to immediately duplicate the resource. Absorptive capacity affects how the firm interacts with a source of knowledge. Small firms relatively rich in absorptive capacity are able to employ an interactive channel of knowledge transfer, such as joint research, whereas small firms that do not perform R&D are likely to be supported by technology centers through a unilateral channel, such as consultation.3

The supply of public technological services in a region consists of national universities

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3 Absorptive capacity also affects the geographical range of knowledge interactions. Small firms with higher absorptive capacity may not rely on local public technology centers since they are likely to have developed global knowledge networks (Beise and Stahl, 1999). Here, it is assumed that small local firms first seek a local market for technological services, and then expand their search for the next best if the first trial fails.
as well as local public technology centers. National research institutes may also contribute to
the supply of public technological services. However, the geographical distribution of national
research institutes in Japan is highly concentrated in Tokyo and Ibaraki prefecture (virtually city
of Tsukuba), while at least one national university with faculties in natural science is located in
each prefecture. Furthermore, national research institutes engage in the R&D of state-of-the-art
technology which has little to do with the technological problems that are encountered by small
local firms. If a national university in a particular region is relatively active in knowledge
interactions with small local firms, it acts as a new entry to the local market of public
technological services.

Figure 3 about here

Based on these arguments, the conceptual framework of regional innovation systems is
illustrated in Figure 3. The triangle at the left-hand side denotes small local firms that demand
public technological services. The bottom of the triangle denotes small local manufacturers that
do not engage in R&D, while the upper side denotes R&D-active small firms. The top of the
triangle denotes small firms that devote themselves to research, such as dedicate biotech firms
(DBFs) or new technology-based firms (NTBFs) or academic spin-offs. Small firms located in
the upper portion of the triangle are assumed to retain higher absorptive capacity, implying that
they are likely to develop interactive and long-term relationships with external source of
knowledge. On the contrary, small firms located in the bottom of the triangle demand public
knowledge for immediate solutions to problems occurring at the shop-floor level, implying that
they are likely to employ a unilateral channel of knowledge transfer.

The rectangles on the right-hand side denote channels of knowledge transfer. Rectangles in the upper (lower) side refer to spillover channels with a relatively large (small)
information gap between firms and external sources of knowledge (Izushi, 2003; 2005). Information gaps are determined by the importance of communication between local public
technology centers and small firms, and the time required for small firms to evaluate the
outcome of technological services. Izushi finds that the relationship between the two evolves
over time. Small firms begin by using technological services with a smaller information gap
such as testing. After having developed mutual trust, small firms employ services with a larger
information gap, such as joint research. Based on his arguments, technology transfer channels
are classified according to their information gap or significance of interactions. Rectangles in
the upper portion indicate that more interactive communication is required due to a larger
information gap. In the case of joint research, scientists from both sides share their ideas, with
matching research efforts, to create new knowledge. Furthermore, intellectual property licensing
entails a larger information gap, which means that it requires efficient communication or
interface between open science and proprietary technology. When university patents are
licensed to the private sector, gatekeepers who retain a deep understanding of both science and
technology play an important role in evaluating the commercial potential of the invention and

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4 Most local authorities have set up at least one public university in every region. There were 76 public universities
as of 2007. Forty-four of these have healthcare-related faculties (not medical schools), such as nursing, which reflects
the fact that they were established to serve as a source of nursing staff in the region. Most public universities do not
engage in research and education in natural sciences other than in fields of medicine, such as engineering. Therefore,
it is unlikely that public universities, compared to national universities, act as a more important source of knowledge
for small local firms. Presently, however, it is difficult to quantitatively examine the role of public universities in
regional innovation systems.
identifying a relevant industry partner who can help commercialize the technology successfully (Thursby and Thursby, 2002). On the contrary, rectangles in the lower portion indicate that hardly any communication is necessary between small firms and technology centers. In the case of technological consultation, the firm only plays a passive role and knowledge is transferred in a unilateral way. Furthermore, little interaction is necessary when local public technology centers either provide firms with testing services or let firms use their equipment.

5. Assessing strategic fit between regional innovation policy and regional innovation system

In Sections 3 and 4, I have introduced the methods in which regional innovation policy and regional innovation system are measured. In this section, how to evaluate strategic fit between the two is demonstrated. Each prefecture (local unit of governance in Japan) is scattered in Figure 4 according to demand- and supply-side factors of a local market for public technological services. The vertical axis denotes proportion of small firms in the manufacturing industry that perform R&D in 2000. The higher this ratio becomes, the greater absorptive capacity an average small local firm is supposed to retain. The data was collected from Bureau van Dijk, Japanese Accounts and Data on Enterprises (JADE). The horizontal axis denotes proportion of joint research projects between national universities and small firms in a region. Annual average of this ratio between 2000 and 2002 is used. The information is obtained from the National Institute of Science and Technology Policy, “University-Industry Collaboration Database.” Around the semi-privatization of national universities in 2004, national universities are increasingly engaged in knowledge interactions with small local firms. When national universities in a region are more eager to engage in joint research with small firms, small local firms will have more opportunities to exploit external sources of knowledge. In creating this variable, observations are limited to joint research projects in natural sciences because the database includes joint research projects in humanities, which have little to do with industrial innovations.

Figure 4 is divided into four parts by lines representing the average of horizontal and vertical axes respectively.\(^5\)\(^6\) Theoretically predicted strategies of local public technology centers in accordance with the characteristics of regional innovation systems are as follows. In Quadrant I, where both the level of the demand and the supply variable are relatively high, there is a latent demand for public technological services in the region due to the presence of R&D-intensive small firms. Furthermore, a relatively high supply-side variable implies that knowledge created in national universities in the region is more accessible (via joint research) to small local firms. It is reasonable that in prefectures located in Quadrant I, small local firms that want to build long-term R&D capacity are to exploit university knowledge in the region to a greater extent. Therefore, in prefectures located in Quadrant I, local public technology centers are required to distinguish themselves from the national university in the region by offering different types of technological services from those provided by national university-based scientists. In these regions, local public technology centers are expected to adopt resource allocation strategy represented as Factor 2 (shown in Section 3).

\(^5\) The correlation coefficient between the demand- and supply-side variables is statistically insignificant, which means that two axes can be depicted as orthogonal.

\(^6\) The results of skewness kurtosis tests for normality show that the null hypothesis of normal distribution is rejected in the case of the supply-side variable (one percent level of significance), implying that a representative value other than average, such as median, might be more appropriate.
In Quadrant II, where the level of the demand variable is relatively high and the level of the supply variable is relatively low, the national university in the region is not willing to interact with small local firms albeit their relatively higher R&D-intensity. This mismatching between needs and supply of technological knowledge implies that in prefectures located in Quadrant II, local public technology centers should fill the gap by retaining higher technological capability (such as excellent scientists) and assist R&D-intensive small firms to achieve innovation. In this case, knowledge transfer from public institutes to the private sector is expected to be interactive because small firms in Quadrant II are likely to retain higher absorptive capacity. Therefore, local public technology centers are expected to adopt resource allocation strategy represented as Factor 1.

In Quadrants III and IV, where the level of the demand variable is relatively low, small local firms are likely to exclusively engage in production and distribution. Therefore, it is reasonable for local public technology centers located in a prefecture that classified in Quadrants III or IV, to adopt resource allocation strategy represented as Factor 2. Within such environments, local public technology centers are expected to offer technological services with a relatively smaller information gap, such as consultation and testing, since small local firms in the region tend to demand local public technology centers for immediate problem solving in the production process rather than building long-term R&D capability. Table 2 summarizes the theoretically predicted strategy (shown in column 4) of local public technology centers that fits with regional innovation system (shown in columns 1, 2, and 3).

| Table 2 about here |

6. Results

Have local public technology centers allocated their resources according to the characteristics of regional innovation system at the period when they were required to demonstrate their strength in the region? In this section the statistical relationship between the characteristics of regional innovation systems and theoretically predicted strategies (shown in Table 2) of local public technology centers is examined. Specifically, whether annual average growth during 2000 and 2008 of each variable representing resource allocation strategies varies according to characteristics of regional innovation systems as of 2000 represented as four quadrants in Figure 4 was tested by analysis of variance. A positive value of annual average growth indicates that the local public technology center reinforced the resource, while a negative value indicates that the local public technology center relinquished the resource. As suggested by Table 2, Factor 1 (the tendency of local public technology centers to intensify their research capacity) should be reinforced in Quadrant II, while Factor 2 (the tendency to support small local firms by providing immediate solutions to technological problems) should be enhanced in Quadrants I, III, and IV. Therefore, variables such as “consult” and “testing” are predicted to exhibit significantly higher growth in Quadrants I, III, and IV while variables such as “quality”, “paper”, and “patent” are predicted to exhibit significantly higher growth in Quadrant II.

| Table 3 about here |

7 In this study the regional environment is assumed to be exogenous and invariant over time, which means that the characteristics of regional innovation system determine the strategies of local public technology centers. However, one can think the opposite flow of causality. Future study will take dynamics of the regional environment into consideration.
Table 3 shows empirical results. A one-way analysis of variance tests the null hypothesis that all means of three or more groups are identical. P value smaller than five percent indicates that the null hypothesis of equal means between groups is rejected. According to theoretical predictions shown in Table 2, variables such as “quality”, “jfres”, “paper”, and “patent” are predicted to demonstrate the highest growth in Quadrant II. The results, however, show no significant difference across quadrants in any of the variable. This implies that local public technology centers allocate resources regardless of characteristics of regional innovation system. Therefore, assuming that the conceptual framework and its operationalization are relevant, resource allocation strategy of local public technology centers was inefficient. Put differently, economic welfare in a region would have improved if local public technology centers had allocated resources in accordance with characteristics of regional innovation system. Small local firms may have been offered unnecessary technological services by local public technology centers while they may have had difficulties in finding technological services they actually needed.

The statistical analysis extracts the “average” look of local public technology center from observations. However, an “outlier” sometimes gives important information when it represents a very distinguished example among observations. Figure 5, the factor scores computed by factor analysis, is depicted in order to illustrate such distinct strategies, i.e., the Osaka Municipal Technical Research Institute. The Osaka Municipal Technical Research Institute exhibits a very distinct strategy that intensifies its own research capability. The quality of human resources is very high, which attracts external research funds via funded research. This leads to a higher research productivity represented as a number of papers and patents. Osaka prefecture is located in Quadrant II, where small local firms are relatively rich in absorptive capacity and where a national university in the region is relatively inactive in knowledge interactions with small local firms. Although there are many R&D-intensive small firms in a big city like Osaka, Osaka University, one of the most prestigious research universities in Japan, develops knowledge networks across prefecture and nation and thus is less embedded in the regional economy. The model developed in this paper suggests that it is reasonable for the Osaka Municipal Technical Research Institute to intensify its research capacity so that small local firms with absorptive capacity can rely on it.

7. Conclusion

Based on a model describing the characteristics of a regional innovation system, this study examined whether the strategy of local public technology centers aligned with the characteristics of the regional innovation system. The results of empirical analysis using a comprehensive database on local public technology centers indicate that the strategy adopted by technology centers was irrelevant to the characteristics of regional innovation system. This suggests the possibility that small local firms lost an opportunity to improve their productivity by leveraging external knowledge, due to the misallocation of resources of local public technology centers in the region. Specifically, small local firms might have found unnecessary types of technological services being provided by local public technological centers, while they were unable to find the service that they actually needed.

Although local public technology centers were uniquely developed in Japan, several general implications for science of policy design and evaluation can be derived from this study. First, this study proposed the concept of strategic fit between regional innovation policy and regional innovation environment. Since there are substantial differences across regions in terms of academic and technological potential, it is important for policymakers to design policy instruments of knowledge transfer according to the characteristics of regional innovation systems. Otherwise, resources allocated to technology transfer activities that do not fit with the regional environment would be unable to contribute to the improvement in knowledge
productivity growth in that region. The case of local public technology centers in Japan suggests that the concept of complementary fits between regional innovation policy and regional innovation environment can be applied to a quantitative policy evaluation of technology transfer infrastructures in other countries. Second, this study developed a new methodology to quantitatively identify the characteristics of regional innovation systems. Specifically, a local market for public technological services is modeled in a way that characteristics of regional innovation systems are identified in terms of demand- and supply-side factors, and is successfully quantified using proxy variables for demand- and supply-side factors. This made it possible to test the statistical association between regional innovation policy and regional innovation environment, as noted earlier. I believe that the methodology employed in this study is helpful for researchers in other areas who attempt to quantitatively evaluate regional innovation policy.

Since the regional innovation policy of establishment and expansion of local public technology centers was “all-round” in that they were established throughout Japan and provided small local firms with a highly standardized menu of technological services, it was difficult for each local public technology center to develop its own strategy in accordance with the characteristics of regional knowledge transfer. However, several cases show the way to establish a clear strategy that fits with the regional environment. Future study will complement the implications of the quantitative analysis with a qualitative analysis in these cases.

References

For recent examples of methodological innovations in the field of studies on national and regional innovation systems, see Dinges et al. (2007) and Lepori (2007).


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Table 1 Definitions and descriptive statistics of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Ph.D. scientists /# of researchers</td>
<td>826</td>
<td>0.18</td>
<td>0.14</td>
<td>0</td>
<td>0.8</td>
</tr>
<tr>
<td>Guide</td>
<td>Technical guidance services /# of researchers</td>
<td>601</td>
<td>25.15</td>
<td>41.34</td>
<td>0</td>
<td>289.3</td>
</tr>
<tr>
<td>Consult</td>
<td>Consulting services offered /# of researchers</td>
<td>888</td>
<td>103.34</td>
<td>110.63</td>
<td>0</td>
<td>822.5</td>
</tr>
<tr>
<td>Testing</td>
<td>Testing services offered /# of researchers</td>
<td>881</td>
<td>206.96</td>
<td>420.44</td>
<td>0</td>
<td>4193.5</td>
</tr>
<tr>
<td>Openlab</td>
<td>Open labs /# of researchers</td>
<td>652</td>
<td>42.63</td>
<td>110.71</td>
<td>0</td>
<td>836.8</td>
</tr>
<tr>
<td>Workshop</td>
<td>Workshops held /# of researchers</td>
<td>898</td>
<td>2.11</td>
<td>5.35</td>
<td>0</td>
<td>117.1</td>
</tr>
<tr>
<td>Paper</td>
<td>Scientific papers published /# of researchers</td>
<td>762</td>
<td>0.20</td>
<td>0.33</td>
<td>0</td>
<td>7.5</td>
</tr>
<tr>
<td>Patent</td>
<td>Patents filed or granted /# of researchers</td>
<td>915</td>
<td>0.72</td>
<td>0.72</td>
<td>0</td>
<td>8.8</td>
</tr>
<tr>
<td>Jfres</td>
<td>Joint and funded research projects /# of researchers</td>
<td>414</td>
<td>0.55</td>
<td>2.63</td>
<td>0.01</td>
<td>21.7</td>
</tr>
<tr>
<td>Quadrant</td>
<td>Absorptive capacity of small firms</td>
<td>Accessibility of small firms to university knowledge in the region</td>
<td>Resources needed to be reinforced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>High</td>
<td>High</td>
<td>Factor 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>High</td>
<td>Low</td>
<td>Factor 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Low</td>
<td>Low</td>
<td>Factor 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Low</td>
<td>High</td>
<td>Factor 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. See Figure * for Quadrants I, II, III, and IV.

2. See Section 3 for Factor 2 and Factor 1.
### Table 3 One-way analysis of variance

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>.037</td>
<td>.681</td>
<td>.087</td>
<td>.114</td>
<td>.710</td>
<td>.045</td>
<td>.176</td>
<td>.083</td>
<td>.134</td>
</tr>
<tr>
<td>II</td>
<td>-.046</td>
<td>1.041</td>
<td>.164</td>
<td>.243</td>
<td>.224</td>
<td>.367</td>
<td>.242</td>
<td>.167</td>
<td>.364</td>
</tr>
<tr>
<td>III</td>
<td>.240</td>
<td>.906</td>
<td>.190</td>
<td>.129</td>
<td>.947</td>
<td>.127</td>
<td>.147</td>
<td>.199</td>
<td>.023</td>
</tr>
<tr>
<td>IV</td>
<td>.015</td>
<td>.936</td>
<td>.095</td>
<td>.197</td>
<td>1.151</td>
<td>.118</td>
<td>.284</td>
<td>.239</td>
<td>.148</td>
</tr>
</tbody>
</table>

F value 2.44 0.07 0.56 0.54 0.68 1.74 0.28 1.39 1.34

** p<.01; * p<.05

Values in cells denote average of annual growth rate.
Figure 1 Local public technology centers by founding year and sector

Notations: agri: agriculture, evrm: environmental science, mfg: manufacturing, misc: miscellaneous
Figure 2 Factor loadings

Rotation: orthogonal varimax
Method: principal factors
Figure 3 The framework of technology transfer in the region

- **R&D-active small firms**
  - Academic spin-offs
  - Building long-term R&D capability via interactive channels
  - Providing immediate solutions to shop-floor problems

- **R&D-inactive small firms**
  - Demand for public technological services

- **Small local firms**
  - Joint research
  - Consultation
  - Testing
  - Inspection

- **Region**
  - Absorptive capacity, R&D intensity
  - Information gaps between the public and private sectors
Figure 4 Identifying characteristics of regional innovation systems
1. The vertical axis denotes the ratio of small local firms that performed R&D in 2000. See Section 4 for detailed definitions. The vertical line denotes the average ratio, approximately 12%.

2. The horizontal axis denotes the ratio of joint researches conducted in association with small local firms by national-university-based scientists involved in natural sciences in 2000. See Section 4 for detailed definitions. The horizontal line denotes the average ratio, approximately 15%.

3. The plane is divided into four quadrants counterclockwise I, II, III, and IV.

4. A scattered value denotes prefectures, the local unit of governance in Japan.
Figure 5 Factor scores

Dots within the circle denote the Osaka Municipal Technical Research Institute.
Risk Management Practices of Scottish, Chinese and German Small and Medium-sized Enterprises (SMEs): A cross-country study

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Abstract

There has been a paucity of research concerning the current state of risk management (RM) in Small and Medium-sized Enterprises (SMEs). Literature searched by the authors has revealed that there are few cross-country studies directly relating to RM in SMEs. The research project is the first of its type with an extensive empirical study into the status of RM in SMEs. The cross-country study investigates whether cultural differences have an influence on the firms’ RM practices. Exploring these questions will provide a clearer understanding of the personal and organizational factors that have influenced the risk management practices of SMEs in the respective countries. This study also seeks to address the influence that the perception of environmental uncertainty has on the risk management efforts in SMEs. The investigation is carried out via a Web-based survey of Scottish, Chinese and German SMEs, followed-up by in-depth research interviews.

Keywords: Holistic Risk Management, Business Planning, Performance Measurement, Small to Medium-sized Enterprises, China, Germany, Scotland

Introduction

Concerning the current state of risk management in Small to Medium-sized Enterprises (SMEs) there are no substantial findings. The national and international literature also offers only a few proposals how a risk management which is suitable for SMEs could be designed (ICAEW, 2005). This fact is often explained by risk management being a very young branch of business management theory which has yet not developed standards (see, for example, Alquier and Tignol, 2006, p. 277, Hoitsch et al., 2006, p. 69).

Much uncertainty in SMEs has been provoked by Basel II, the new international equity capital regulations on lending by banks. In connection with the evaluation and rating process borrowers are subject to, Basel II demands from the banks to make an assessment as to how the companies deal with the opportunities and risks presented by their development.
The Basel II regulations do not explicitly demand to establish a comprehensive and strictly formalized risk management system (see Basel Committee on Banking Supervision, 2003). Nevertheless, when rating an SME, the lending bank will assess the management accounting instruments and the abilities of management. This covers to determine whether a risk management system has been implemented to a certain extent and whether replacement regulations have been fixed (Füser and Heidusch, 2002, p. 61).

A risk management system is, however, necessary for SMEs, not only because it is required by law or by the Basel II regulations, but rather because it is in the essential interest of the SMEs. The reason is that such enterprises have a high potential to become insolvent and the most frequent causes of insolvency are management errors and weaknesses in the company structure. This is especially true during the first 7 years following the establishment of the company (Günterberg and Kayser, 2004; Almus, 2004).

To classify SMEs, the European Union utilizes the following grouping definition (Table 1):

<table>
<thead>
<tr>
<th>Subclass</th>
<th>Number of employees</th>
<th>Annual turnover (million euros)</th>
<th>Balance sheet total (million euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro firm</td>
<td>&lt; 10</td>
<td>≤ 2</td>
<td>≤ 2</td>
</tr>
<tr>
<td>Small firm</td>
<td>&lt; 50</td>
<td>≤ 10</td>
<td>≤ 10</td>
</tr>
<tr>
<td>Medium-sized firm</td>
<td>&lt; 250</td>
<td>≤ 50</td>
<td>≤ 43</td>
</tr>
</tbody>
</table>

Source: Commission of the European Communities (2005)

To belong to one of the classes micro, small and medium-sized, a firm must fulfil the following conditions:

The number of employees is below the respective threshold in Table 1. Furthermore, at least one of the thresholds for annual turnover and balance sheet total is met.

The “legal independence criterion” must be fulfilled: A maximum of 25 percent is owned by one or more companies which themselves do not match the threshold conditions of No. 1.

The above definition has been valid since 2005 and is updated in terms of annual turnover and balance sheet total at longer intervals of time (Commission of the European Communities, 2005).
From the international perspective there are major differences in the meaning of the criterion “number of employees”. While for example in the United Kingdom a company only with fewer than 250 employees is considered to be an SME, in China the figure increases to 3000 employees (Schaper et al., 2008, p. 3).

In order to ensure comparability with other research results, the EU size class definitions for SMEs will be taken as a basis in this paper. Further, additional employee classes will be included as size measure.

The present research project attempts to investigate the current state of risk management more comprehensively. This includes in particular the manager’s knowledge of business management methods and the manager’s behavior with respect to risk and decision-making. A cross-country research with a focus on examining the culture influences of risk management behavior offers a distinct approach to the limited existing studies of risk management in SMEs. The investigation is carried out with the aid of online questionnaire. The questionnaire results are deepened by research interviews with selected enterprises.

**Literature Review**

The literature reveals that risk management is still in an early phase of development and that no standard for SMEs has yet become established which would describe how a comprehensive risk management should appear (Troßmann and Baumeister, 2004, p. 80). There is also little in the existing SME literature on actual implementations and risk management methods, and as a result this aspect is covered in more depth by current research projects (Consultation and Research Centre of ICAEW, 2005, p. 5; O’Hara et al., 2005, p. 32, Berry et al., 2007).

The research work carried out to date on risk management in SMEs can be grouped into the following main themes: One area is the management of financial risks and the insurance coverage of SMEs, which has already been more heavily researched (Deakins and Bentley, 1995). The other area is the attitude of SMEs towards risk (see Janney and Dess, 2006; Watson and Robinson, 2003; Sparrow and Bentley, 2000; Smallman, 1996).

It is generally accepted that the risk management process basically consists of the following four steps (see Vaughan and Vaughan, 2001):

- identification of risks
- quantification and thus evaluation of risks
- management and control of risks
- continued reporting on the development of risks

As part of the organization of risk management the company management therefore has to set out the basic strategies for risk management and to nominate the personnel in the company to be responsible for the steps risk identification, evaluation and control.
Smallman (1996, p. 15) argues that a holistic risk management is characterized by three main aspects.

The first aspect is a continuous monitoring of all sources of risk. Special attention should also be given to what are termed weak signals. Information on risks should be gathered together from the most diverse sources and in particular from the customer and market perspectives.

The second aspect is the combination of qualitative and quantitative techniques on risk assessment and risk monitoring. Since to some extent qualitative (i.e. non-financial) risks also play an important role in the risk fields, it is not possible to concentrate only on probability theory and actuarial models. Just as equally qualitative techniques such as scenario planning or other qualitative instruments must be applied here. Nowadays (2009) the literature on modern performance measurement techniques (such as Balanced Scorecard or shareholder value) emphasizes their application for risk management purposes (see for example, Wolf, 2003, p. 85; Scholey, 2006).

The third aspect concerns the organizational learning where one learns from past errors and disasters and where a culture is established in the company allowing for a positive approach to dealing with mistakes and does not punish employees for mistakes. In this way a knowledge management within the company can also be employed for the purposes of risk management. On top of this one should take into account the company’s culture and leadership structure, in particular the management behaviour in SMEs (Janney and Dess, 2006; Richbell et al., 2006).

The authors of the present study estimate a sound business planning to be vital for managing risks. It is an important step in the direction of a good risk management, which allows determining the impact of risky issues on the firm’s target figures profit and liquidity.

The following Figure 1 assembles the aspects which, according to the authors of this paper, a comprehensive risk management should cover.
This study seeks to answer the following research questions:

1. What is the impact of personal and organizational characteristics on attitudes to risk?

2. Do SMEs attempt to manage risk, and, if so, what strategies and methods are employed for this purpose?

Exploring these questions will provide a clearer understanding of the personal and organizational factors that have influenced the risk management practices of SMEs in the respective countries. This study also seeks to address the influence that the perception of environmental uncertainty has on the risk management efforts in SMEs (Matthews and Scott, 1995; Rauch et al, 2000; Heavey et al, 2009).

**Methodology**

At the time of the investigation in 2010, only little data was available on the state of risk management in German SMEs. This gave rise to the decision to determine current risk management practices in SMEs by an explorative approach. It was carried out by an online (Web-based) questionnaire and by research interviews. The questionnaire was first developed in English and, after amendments for clarity and removal of ambiguity, the finalized questionnaire was translated into Chinese and into German language. The questionnaire was five pages long and contained 16 close-ended questions. Whenever practical, questions were posed seeking responses on a Likert scale to gauge the extent of the measure.

Ten semi-structured research interviews of each country are held to examine RM practices in detail. The interviews will address companies that have filled in the questionnaire as well as some that have not been influenced by it. Descriptive and comparative data analysis techniques appropriate for examining the central research questions are employed.
First, the online questionnaire inquired for the enterprise’s demographic data:

- size by number of employees
- industrial sector
- position of the interviewee in the organization

The remaining questions cover the aspects of a holistic risk management as described in Figure 1: business planning, performance measurement, risk management process, risk management organization and the management behaviour. The management behaviour investigates the attitudes of SME managers to risk and uncertainty.

After having analysed commercial address databases for drawing the sample, the decision was made to work with the Hoppenstedt (2009) and FAME (2009) database for German and Scottish SMEs. These are well-known and annually updated databases containing information about ca. 65,000 SMEs, the largest SME databases with an over-regional focus. They are oriented towards the European Union definition of SMEs, and the firm profiles contain all essential quantitative information. The participating Chinese SMEs were selected from an official domestic database (SME Department of Ministry of Industry and Information Technology of the P.R. China, 2010) to represent a relevant and comparable research sample.

**Conclusion**

As the literature review has revealed, little is known about the present level of sophistication of risk management in SMEs. In particular, it is not clear which factors can positively influence the establishment of a risk management system in SMEs (examples of such factors are size effects, industry effects, staff responsibilities etc.). Therefore up till now (2010) generally only single aspects of risk management have been investigated, such as the management of operational risks.

One of the key findings of the literature analysis is that the attitude of the managing director towards risk plays an essential role in how systematically risks are handled. Often he lacks sophisticated business management knowledge, as would be needed for a comprehensive risk management approach.

Among the instruments that can serve for risk management, the business planning is the one which is dealt with by the literature to the greatest extent. In general, the results indicate that there is still some need for improving planning systems, whether or not they are used for risk management. It is worth while noting that the extent how firms value planning is dependent on the cultural context.

There are only few studies on how well known instruments of performance measurement are to SME’s and to what degree they are established. Most frequently, the literature has probed the Balanced Scorecard. Investigations on the SMEs’ application of instruments of performance measurement for handling risks are rarely carried out.
Summarizing, there are no empirical studies on risk management practices in Scottish, Chinese and German SMEs, following a broader perspective rather than dealing with isolated topics. The main aim of the present paper is to fill this gap. The investigation will follow the lines of the holistic approach to risk management outlined in the literature review.

References


The Effect of Public Policy on Entrepreneurial Activity: Evidence from OECD Countries
by Younghwan Kim, Wonjoon Kim, and Taeyong Yang

The importance of public policy as a determinant of national entrepreneurship level has attracted the interest of many researchers and policymakers. However, empirical explorations are hardly found regarding structural and holistic policy framework to examine the determinants of entrepreneurial activity at the country level, due to the variety of policy measures and data limitation. In this paper, we examine the effects of finance, labor, and tax policy measures on entrepreneurial activity of the 28 countries in the OECD. Through the empirical analysis, we find that the government expenditure on economic affairs and education plays an important role in promoting entrepreneurship, and discover that an increase in the public expenditure on start-up incentives enhances the level of entrepreneurial activity. On the other hand, classifying the countries into four groups based on the level of entrepreneurship and economy, this paper suggests context-based entrepreneurship policy of the countries in different phase of economic development.

Introduction

The importance of entrepreneurship in economic development and job creation has been highlighted by many previous studies. Many research works have showed that promoting entrepreneurial activity leads to the economic growth (Audretsch and Keilbach 2004; Rocha 2004; Wong, Ho, and Autio 2005). Therefore, the governments in developing countries as well as developed countries are trying to promote entrepreneurial activity for their economic growth. With a lot of interests on entrepreneurship, there have been many attempts finding the determinants of entrepreneurial activity at the country level or at the regional level.

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Lundstrom and Stevenson (2005) categorized these influences presented in the previous studies into five groups: *demographic, macro-economic and structural dimensions, cultural dimensions, human dimensions, SME density and entrepreneurial dynamic dimensions,* and *policy dimensions.* Among these categories, the policy dimensions are the most important factors to promote entrepreneurial activity at the national level. There are much differences on the level of entrepreneurial activity across countries. The differences can be caused by the variety of individual traits, capabilities, competencies or characteristics. However, the country’s regulation and policy that make starting a business easier also have a great effect on the entrepreneurial activity of the country. Therefore, to enhance the level of entrepreneurial activity, for a decade, the government has implemented “support” policies to the entrepreneur and has minimized regulations to start a business as quickly and cheaply as possible (van Stel, Storey, and Thurik 2007).

Nevertheless, it has not been clearly examined yet what policy measures affect the entrepreneurial activity at the national level. Previous empirical studies on the relationship between public policy and entrepreneurship have merely covered one or several countries (Rocha and Sternberg 2005; Acs et al. 2007; Levie 2007), or single policy region (Kanniainen and Vesala 2005; Bruce and Mohsin 2006; Ho and Wong 2007), due to the data limitation about various national public policy measures. On the other hand, previous studies, which considered entrepreneurial activities of multi-countries, used the data of subjective evaluations for entrepreneurship policy factors by some experts (Levie and Autio 2008), or used the data from World Bank Database (WBDB) which is rank-based data among the countries (Ho and Wong 2007; van Stel, Storey, and Thurik 2007), because estimating exact effects of policy measures is very difficult. In addition, these previous research works on the public policy and entrepreneurship using multi-country data have limited their analyses to finding common determinants of entrepreneurship for all countries in their samples, without
considering the national context for entrepreneurial activity and suggesting customized policies according to the country or the group of countries (Ho and Wong 2007; van Stel, Storey, and Thurik 2007; Levie and Autio 2008; Nofsinger and Reca 2009).

Therefore, in this paper, we examine the public policy determinants of entrepreneurial activity at the national level through structural and holistic policy framework, which consists of finance, labor, and tax policy region, using consistent and objective data of policy factors from the Organization for Economic Cooperation and Development (OECD) database. In addition, classifying the OECD countries into four groups according to the level of entrepreneurial activity and their economies, we investigate differences on public policy factors among the groups and suggest context-based public policies to promote entrepreneurial activity by group.

Consequently, by revealing the different policy determinants of national entrepreneurship index, our study contributes to entrepreneurship policy literature suggesting a more customized and structural public policy of the countries in different phase of economic development for promoting entrepreneurship.

Public Policy and Entrepreneurial Activity

The Unit and the Level of Analysis about the Relationship between Public Policy and Entrepreneurship in the Literature

As mentioned in the study of Acs and Szerb (2007), previous research works that have examined the relationship between public policy and entrepreneurship used various policy measures in the various policy regions for their analyses. Such works can be classified by the two dimensions: unit of analysis and level of analysis (Acs and Szerb 2007). The unit of analysis can be individual and aggregate, and the level of analysis can be regional, country-
The individual unit of analysis has been used for examining the relationship between individual characteristics, such as personal traits, motivation, and educational attainment, and an individual decision on start-up activity (Areninus and Minniti 2005; Acs et al. 2007; Bergmann and Sternberg 2007; Levie 2007; Minniti and Nardone 2007). On the other hand, the aggregate unit of analysis has been used for finding determinants of entrepreneurial activity of a certain area, such as firm birth rate in Costa Rica, collecting the macro data of the area, not the individual (Wennekers et al. 2005; Ho and Wong 2007; van Stel, Storey, and Thurik 2007).

On the other hand, the analysis at the regional level has found the determinants of regional entrepreneurial activity in a single country (Rocha and Sternberg 2005; Levie 2007; Cumming and Li 2009). The country-wide level has been mainly used in the analysis for comparison on the determinants of entrepreneurial activities in two or three countries (Acs et al. 2007), and the analysis at the international level has tried to explain the difference on the level of entrepreneurship across the countries (Areninus and Minniti 2005; Wennekers et al. 2005; Ho and Wong 2007; Minniti and Nardone 2007; van Stel, Storey, and Thurik 2007).

To examine what policy measures affect entrepreneurship in a country and find differences on public policy to promote entrepreneurial activity across the countries, the aggregate unit and the international level should be applied in the analysis. However, in actually, it is very difficult to collect the data of many countries about various entrepreneurship-related policy measures. Hence, previous empirical studies on the relationship between public policy and entrepreneurship merely covered one or several countries (Rocha and Sternberg 2005; Acs et al. 2007; Levie 2007), or single policy region (Kanniainen and Vesala 2005; Bruce and Mohsin 2006; Ho and Wong 2007).

Therefore, in our analysis, using the aggregate unit and the international level, we
examine public policy determinants of the entrepreneurial activity at the national level through the structural and holistic policy framework. Especially, among the policy measures in the region of *taking entrepreneurship into account in setting national policies* and the region of *policies that primarily affect entrepreneurs*, which were mentioned in the study of Acs and Szerb (2007), we focus on finance, labor and tax policy which are the most direct and effective policies for promoting entrepreneurial activity at the country level.

**Finance, Labor and Tax Policy and Entrepreneurial activity**

In the entrepreneurship literature, many studies have highlighted the importance of financing for entrepreneurial activity, such as new firm formation, firm growth and firm survival. Holtz-Eakin, Joulfaian, and Rosen (1994) selected individual received inheritance as a measure of access to capital to examine the relationship between liquidity constraints and the likelihood of firm survival and performance. They concluded that the enterprise by the person who received much inheritance is more likely to survive, and if it does survive, it performs better. Bates (1995) showed that financial capital constraints decide self-employment entry, dividing whole sample into five groups according to the household net worth that represents financial condition. However, van Gelderen, Thurik, and Bosma (2006) selected a binary variable, whether one makes a loan or not and the amount of start-up capital as financial factors, and found that more start-up capital have lower probabilities to get their business running. The study of van Auken (1999) also explained the availability of capital is an important common obstacle confronting potential new business owners. On the other hand, Ho and Wong (2007) selected three factors about the availability of different sources of financing for new firms: availability of debt finance, availability of informal investors, and availability of venture capital. Among these factors, the availability of informal investors only has significant and positive effect on the overall, high growth potential, and opportunity Total
Entrepreneurial Activity (TEA) index developed by Global Entrepreneurship Monitor (GEM).

Labor policy also has a great effect on new firm formation as well as incumbent small firms. Potential entrepreneurs are reluctant to start a business when the average labor cost and the minimum wage level are high. On the other hand, the firm birth rate can increase if the government provides supportive policy for new employment due to the diminution of the employment cost which the employer is obligated. However, related previous studies have mainly focused on the effect of labor market institutions on the employment, so that previous research works about the relationship between labor policy and new firm formation have not highlighted (Kanniainen and Vesala 2005).

Nevertheless, Choi and Phan (2006) distinguished the policy factors that affect new firm formation into opportunity factor and individual factor, and selected unemployment and labor unionism as the labor policy measures in the group of individual factor. As a result, the unemployment has no significant effect on the new firm formation, while the labor unionism is negatively and significantly related with the firm birth. Goetz and Rupasingha (2009) used minimum wage legislation, government employment as a percentage of total state/provincial employment, and union density as variables of labor market freedom in order to explain the effect of labor policy on growth in non-farm proprietor densities in the United States. In addition, Kanniainen and Vesala (2005) classified measures of labor market institutions in detail to find the determinants of new firm formation. They empirically discovered that labor market regulation suppresses firm birth, higher labor union power reduces firm birth rate, and higher employment compensation becomes an obstacle in the growth of firm birth rate.

Tax policy is also important on promoting entrepreneurial activity. According to whether or not new firm is incorporated, the entrepreneur has a duty of payment of personal income tax or corporate income tax. Many researchers have tried to estimate the effect of tax policy on new firm formation or firm performance. The most popular research topic is an effect of
tax policy on the change of self-employment ratio. Long (1982) and Blau (1987) are pioneers in this field of research. After their studies, many studies about the relationship between self-employment ratio and tax rate have followed. Parker (1996) analyzed the effect of marginal tax rate on self-employment ratio in the UK, following Blau’s approach. He found that higher marginal tax rate leads the increase in self-employment ratio.

The next stream of previous literature has examined tax policy measures that affect an individual decision of entrepreneurial activity with cross-sectional or panel data. Bruce (2000) showed that the difference between personal marginal wage tax rate and personal marginal self-employment income tax rate hinders becoming self-employed from wage-and-salary employee. In addition, low average tax rate of self-employment leads high probability of becoming self-employed. Gentry and Hubbard (2000) discovered that progressivity of the tax discourages entry to self-employment, contrary to general expectation. The study of Cullen and Gordon (2002) also revealed that a cut in personal tax rate reduces entrepreneurial activity.

In recent related literature, tax factors as candidates of determinants of entrepreneurship have broadly and variously selected. Bruce and Mohsin (2006) used top income tax rate, top capital gains tax rate, top corporate income tax rate, wage-and-salary payroll tax rate, self-employment payroll tax rate and estate tax exclusion as tax policy variables. In addition, Goetz and Rupasingha (2009) selected total government revenue from own source as a percentage of GDP, top marginal income tax rate and the income threshold at which it applies, indirect tax revenue as a percentage of GDP, and sales taxes collected as a percentage of GDP.

As mentioned above, there have been many studies that examine the effect of each of finance, labor and tax policy region on entrepreneurial activity. However, the importance of comprehensive establishment and implementation of the policy for directly inspiring potential entrepreneurs and promoting entrepreneurial activity has not been carefully dealt with.
Therefore, in this paper, we examine the role of finance, labor and tax policy in the enhancement of entrepreneurial activity in the OECD member countries through OECD Statistics Database. Through regression analysis, we find what kind of policy measures amongst finance, labor and tax policy region are the most important in dissemination of entrepreneurship at the national level. In addition, we classify the OECD countries into four groups according to the level of entrepreneurial activity and national economy, and find differences on policy measures among the groups, and suggest context-based public policies to promote entrepreneurial activity.

**Data and Variables**

**Data**

In this paper, using the OECD’s countrywide statistics database, we estimate the effect of finance, labor and tax policy on entrepreneurial activity at the country level. In the year 2009, the OECD consists of 30 countries as members. Due to the completion of collecting demographic data, and economic data, as well as social data of the member countries through these various activities, we can obtain the data of 30 member countries and several important non-member countries by various topics through the OECD’s online database, which is called ‘OECD. Stat Extracts’.\(^1\) Table 1 shows the first-level classification by topic of OECD’s statistics databases which can be obtained from ‘OECD. Stat Extracts’.

Among these topics, selecting ‘General Statistics’, ‘Finance’, ‘National Accounts’, ‘Labour’, and ‘OECD Tax Database’\(^2\) which is the other database by the OECD, we obtained

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\(^1\) Its objective is to provide a single online platform where the researcher can discover and use its statistical databases. It contains some complete databases and data ‘cubes’ on the provision of lots of themes extracted from other databases (website: http://stats.oecd.org).

\(^2\) The OECD annual tax database by Centre for Tax Policy and Administration (website: www.oecd.org/ctp/taxdatabase).
Table 1
OECD Statistics Databases by Topic (from ‘OECD. Stat Extracts’)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>General statistics</td>
<td>International trade and balance of payments</td>
</tr>
<tr>
<td>Agriculture and fisheries</td>
<td>Labour</td>
</tr>
<tr>
<td>Demography and population</td>
<td>Monthly economic indicators</td>
</tr>
<tr>
<td>Development</td>
<td>National accounts</td>
</tr>
<tr>
<td>Economic projections</td>
<td>Prices and purchasing power parities</td>
</tr>
<tr>
<td>Education and training</td>
<td>Productivity</td>
</tr>
<tr>
<td>Environment</td>
<td>Public sector, taxation and market regulation</td>
</tr>
<tr>
<td>Finance</td>
<td>Regional statistics</td>
</tr>
<tr>
<td>Globalisation</td>
<td>Science, technology and patents</td>
</tr>
<tr>
<td>Health</td>
<td>Social and welfare statistics</td>
</tr>
<tr>
<td>Industry and service</td>
<td>Non-member economies</td>
</tr>
<tr>
<td>Information and communication technology</td>
<td>Others</td>
</tr>
</tbody>
</table>

the data for finance, labor and tax policy measures of 30 countries, covering the years 2000 to 2006. On the other hand, to measure the entrepreneurial activity, we included TEA index developed by GEM. The TEA index also covers the years 2000 to 2006. However, the OECD’s statistics databases have no data on certain measures of certain countries in certain years, and the GEM database also has missing data. In particular, the TEA rates of Luxembourg and Slovak Republic among the OECD members do not observed. In other words, both of the OECD’s data and GEM’s data are unbalanced panel data.

**Dependent Variable**

The empirical literature extensively has resorted to the *TEA index*, which is developed within the framework of the GEM project, as a proxy variable of the level of entrepreneurial activity. In particular, in some previous studies which examined the relationship between public policy or government regulation and entrepreneurial activity for national comparison, the TEA index has been selected as a measure of the national level of entrepreneurial activity.
(Wennekers et al. 2005; Ho and Wong 2007; van Stel, Storey, and Thurik 2007; Levi and Autio 2008). In this study, we collected the TEA rate of the member countries in the OECD as a measure of the entrepreneurial activity of the country, investigating GEM’s annual global executive reports in the years 2000 to 2006. The TEA rates of Luxembourg and Slovak Republic among the OECD members do not observed. Other countries in the OECD also have missing data. The number of total observation on the TEA rate is 146 (see Table 3).

**Independent Variables**

Access to finance is the most widely recognized issue of entrepreneurship policy, and insufficient finance resource is regularly cited by potential entrepreneurs as a barrier to start a business (Levie and Autio 2008). In our study, we include *short-term interest rate, household investment fund shares, and government expenditure* as explanatory variables in the finance policy region (see Table 2). In previous studies, bank prime loan rate (Choi and Phan 2006), ease to access loans (van Stel, Storey, and Thurik 2007), and availability of debt finance (Ho and Wong 2007) were used, as proxy variables of the short-term interest rate, however they did not find the significant effects of these variables on the entrepreneurial activity. The variable of household investment fund shares means the investment fund shares in financial assets of households, as the assets of the households are divided into financial assets and non-financial assets. The investment fund shares can be more related to the funds for the investment on business than other assets of households. Therefore, we can expect that the entrepreneurial activity increases as the investment fund shares per capita increases. Using availability of informal investors as a proxy variable of the household investment fund shares, Ho and Wong (2007) found that the availability of informal investors positively affects the TEA rate. The OECD provides the statistical data of the member countries by ten functions of government expenditures (see Table 2). We select the four functions which may be directly
related on the start-up activity: general public services, public order and safety, economic affairs, and education, as subordinate variables of the government expenditure.

In the labor policy region, unit labour cost, unemployment rate, and public expenditure on labour market programmes (LMP) are selected (see Table 2). Our expectation is that lower unit labour cost can enhance the level of the entrepreneurial activity. Unemployment rate has been preferred as a determinant of entrepreneurship in the previous research works. However, the effect of the unemployment rate on entrepreneurial activity is not consistent in the literature (Kannianinen and Vesala 2005; Choi and Phan 2006; Bergmann and Sternberg 2007; Goetz and Rupasingha 2009). On the other hand, the shrinkage of entrepreneurial activity can increase the unemployment rate: a simultaneous causality problem. Therefore, to exclude this kind of problem, we used one-year-lag of the unemployment rate variable.\(^3\) Public expenditure on LMP is a total amount of public expenditures on individual labour market programmes as a percentage of Gross Domestic Product (GDP). The OECD classifies various labour market programmes by the government into active measure and passive measure (see Table 2). Among detailed classifications of the active measure, we expect the variable of start-up incentives is the most directly related factor to the entrepreneurial activity. We can expect that the TEA rate increases as the public expenditure on the start-up incentives as a percentage of GDP grows.

We usually expect that high corporate income tax rate hinders the people starting a business, and high individual income tax rate promotes becoming entrepreneurs from wage- and-salary employee or self-employed. In addition, we can forecast that high burden on social security contributions of the employer reduces the firm birth. However, the results about the tax effect on entrepreneurship in previous studies are not consistent (Wennekers et al. 2005;)

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\(^3\) We also considered the unemployment rate without a lag, and those with two-year-lags and three-year-lags in our analysis. As a result, as we use one-year-lag of the unemployment rate, the models have the lowest values of mean Variance Inflation Factor (VIF), and the results of significant variables are consistent among various regression models which we try to apply.
van Stel, Storey, and Thurik 2007; Cumming and Li 2009; Nofsinger and Reca 2009). In our study, to examine the relationship between tax policy and the national level of entrepreneurial activity, we select marginal personal income tax (PIT) and social security contribution (SSC) on gross labour income (GLI), average PIT and SSC on GLI, and corporate income tax rate (combined) from ‘OECD Tax Database’ as measures of tax policy.\(^4\) We collect this type of the tax rates due to include the average tax burden as a percentage of individual gross income in a country in our empirical analysis. On the other hand, we select corporate income tax rate as a candidate of determinant on the TEA rate. This variable is calculated by combining central and sub-central government corporate income tax rate (see Table 2).

**Control Variables**

Previous studies that examined the determinants of entrepreneurial activity have preferred real GDP growth as one of the important control variables (Wennekers et al. 2005; Bergmann and Sternberg 2007; Ho and Wong 2007; van Stel, Storey, and Thurik 2007; Levié and Autio 2008). However, most studies that considered the GDP growth rate have a single year or up-to-three year data set, so that the results on the significance of the GDP growth variable from them have not been consistent. In this paper, we expect that the TEA rate increases as real GDP growth rate increases. On the other hand, because we have a seven-year data set, the variable trend is also involved in the regression model. The number of observations and the descriptive statistics for each of the variables are shown in Table 3.

\(^4\) We also considered the total tax revenue as percentage of GDP and its subordinate factors, such as individual tax on income, profits and capital gains, corporate tax, SSCs of employees, SSCs of employers, SSCs of self-employed or non-employed, tax on property, and tax on goods and services as percentage of GDP from the topic of ‘Public sector, taxation and market regulation’ of OECD. Stat Extracts (Wennekers et al. 2005). However, we excluded these tax variables, due to multicollinearity problem among the subordinate tax variables and between the variables of public expenditure on LMP (total, active, and passive measure) and the tax variables.
<table>
<thead>
<tr>
<th><strong>Variables</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TEA rate</td>
<td>Early-stage entrepreneurial activity (TEA: Total Entrepreneurial Activity) in percentage by GEM, combining the prevalence rate of nascent entrepreneurs and new business owners.</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>Annual growth of real GDP ignoring price changes in percentage (from ‘General Statistics’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>Finance policy variables</td>
<td></td>
</tr>
<tr>
<td>Short-term interest rate</td>
<td>The three month interbank offer rate (percentage) attaching to loans given and taken amongst banks for any excess or shortage of liquidity over several months, or the rate associated with Treasury bills, Certificates of Deposit or comparable instruments, each of three month maturity (from ‘Finance’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>Household investment fund shares</td>
<td>One sort of the households’ financial assets. Investment funds shares are sum of subcategories of funds classified according to their main support: Money market fund shares, Real estate fund shares, Bond fund shares, Mixed fund shares, and Other fund shares. The unit of household investment fund shares was transformed into thousands of U.S. dollar per capita (from ‘Finance’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>Government expenditure (total)</td>
<td>Total amount of government expenditures by function. Economic flows of expenditure must be aggregated according to the Classification of the Functions of Government (COFOG). COFOG has following 10 functions at the first level of the classification: General public services, Defense, Public order and safety, Economic affairs, Environmental protection, Housing and community amenities, Health, Recreation, culture and religion, Education, and Social protection. The unit of total government expenditure was transformed into thousands of U.S. dollar per capita (from ‘National Accounts’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>General public services</td>
<td>Government expenditures by function ‘General public services’ as a percentage of total government expenditure.</td>
</tr>
<tr>
<td>Public order and safety</td>
<td>Government expenditures by function ‘Public order and safety’ as a percentage of total government expenditure.</td>
</tr>
<tr>
<td>Economic affairs</td>
<td>Government expenditures by function ‘Economic affairs’ as a percentage of total government expenditure.</td>
</tr>
<tr>
<td>Education</td>
<td>Government expenditures by function ‘Education’ as a percentage of total government expenditure.</td>
</tr>
<tr>
<td>Labor policy variables</td>
<td></td>
</tr>
<tr>
<td>Unit labour cost</td>
<td>Total labour costs expended in the production of one unit of output (total labour costs / real output) in the sector ‘business sector excl. agriculture’ (tabulation category of C_K), which is derived from the ISIC Rev. 3 (from ‘Labour’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>The ratio of number of persons unemployed and the number of persons in the labour force. The criteria for a person to be considered as unemployed or employed are defined by the International Labor Organization (ILO) guidelines. Seasonally adjusted (from ‘Labour’ of the OECD. Stat Extracts) (one-year-lag, t-1).</td>
</tr>
<tr>
<td>Public expenditure on LMP (total)</td>
<td>Total amount of public expenditures on individual labour market programmes (LMPs) as a percentage of GDP. LMPs are divided into two groups: Active measures and Passive measures (from ‘Labour’ of the OECD. Stat Extracts).</td>
</tr>
<tr>
<td>Start-up incentives</td>
<td>One sort of the active measures of public expenditure on LMP. Public expenditure on the programmes that promote entrepreneurship by encouraging the unemployed and target groups to start their own business or to become self-employed (in percentage of GDP).</td>
</tr>
<tr>
<td>Active measure</td>
<td>Total amount of public expenditures on active measures of LMPs as a percentage of GDP. Active measures involve following sections: Public employment services and administration, Training, Job rotation and job sharing, Employment incentives, Supported employment and rehabilitation, Direct job creation, and Start-up incentives.</td>
</tr>
<tr>
<td>Passive measure</td>
<td>Total amount of public expenditures on passive measures of LMPs as a percentage of GDP. Passive measures involve following sections: Out-of-work income maintenance and support and Early retirement.</td>
</tr>
<tr>
<td>Tax policy variables</td>
<td></td>
</tr>
<tr>
<td>Marginal PIT &amp; SSC on GLI</td>
<td>The ‘all-in’ marginal tax rate, calculated as the combined central and sub-central government income tax (PIT) plus employee social security contribution (Employee SSC), as a percentage of gross labour income (GLI) at the 100% level of AW/APW (Average wage/Average production wage) (from the ‘OECD Tax Database’).</td>
</tr>
<tr>
<td>Average PIT &amp; SSC on GLI</td>
<td>The ‘all-in’ average tax rate, calculated as the combined central and sub-central government income tax (PIT) plus employee social security contribution (Employee SSC), as a percentage of gross labour income (GLI) at the 100% level of AW/APW (Average wage/Average production wage) (from the ‘OECD Tax Database’).</td>
</tr>
<tr>
<td>Corporate income tax rate (combined)</td>
<td>The basic combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central government rate (from the ‘OECD Tax Database’).</td>
</tr>
</tbody>
</table>

**Table 2**

**Variable Descriptions**
### Table 3
Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>obs.</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>6</th>
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<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TEA rate</td>
<td>146</td>
<td>7.47</td>
<td>3.61</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>2. Real GDP growth</td>
<td>210</td>
<td>3.17</td>
<td>2.05</td>
<td>0.26</td>
<td>1.00</td>
<td></td>
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<tr>
<td>3. Short-term interest rate</td>
<td>187</td>
<td>5.24</td>
<td>6.93</td>
<td>0.53</td>
<td>-0.02</td>
<td>1.00</td>
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<tr>
<td>4. Household investment fund shares</td>
<td>168</td>
<td>4.60</td>
<td>4.56</td>
<td>0.11</td>
<td>-0.24</td>
<td>-0.27</td>
<td>1.00</td>
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<tr>
<td>5. Government expenditure (total)</td>
<td>180</td>
<td>12.36</td>
<td>6.91</td>
<td>-0.24</td>
<td>-0.13</td>
<td>-0.37</td>
<td>0.48</td>
<td>1.00</td>
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<tr>
<td>6. General public services</td>
<td>175</td>
<td>14.57</td>
<td>3.30</td>
<td>-0.10</td>
<td>-0.09</td>
<td>0.07</td>
<td>0.21</td>
<td>-0.30</td>
<td>1.00</td>
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<tr>
<td>7. Public order and safety</td>
<td>175</td>
<td>3.74</td>
<td>1.13</td>
<td>0.33*</td>
<td>0.18*</td>
<td>0.14</td>
<td>0.07</td>
<td>-0.57*</td>
<td>-0.08</td>
<td>1.00</td>
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<tr>
<td>8. Economic affairs</td>
<td>175</td>
<td>10.99</td>
<td>4.09</td>
<td>0.34*</td>
<td>0.35*</td>
<td>0.24*</td>
<td>-0.32*</td>
<td>-0.39*</td>
<td>-0.10</td>
<td>0.34*</td>
<td>1.00</td>
<td></td>
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<tr>
<td>9. Education</td>
<td>175</td>
<td>12.79</td>
<td>3.10</td>
<td>0.64*</td>
<td>0.07</td>
<td>0.28*</td>
<td>0.29*</td>
<td>0.09</td>
<td>-0.17*</td>
<td>0.27*</td>
<td>0.12</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>10. Unit labour cost</td>
<td>202</td>
<td>0.58</td>
<td>0.11</td>
<td>-0.35*</td>
<td>-0.28*</td>
<td>-0.60*</td>
<td>0.49*</td>
<td>0.25*</td>
<td>0.09</td>
<td>0.02</td>
<td>-0.14</td>
<td>0.11</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>11. Unemployment rate</td>
<td>200</td>
<td>7.09</td>
<td>3.83</td>
<td>-0.25*</td>
<td>0.21*</td>
<td>0.04</td>
<td>-0.21*</td>
<td>-0.38*</td>
<td>0.21*</td>
<td>0.17*</td>
<td>-0.12</td>
<td>-0.47*</td>
<td>-0.15*</td>
<td>1.00</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Public expenditure on LMP (total)</td>
<td>181</td>
<td>1.63</td>
<td>1.09</td>
<td>-0.45*</td>
<td>-0.32*</td>
<td>-0.35*</td>
<td>0.18*</td>
<td>0.43*</td>
<td>0.18*</td>
<td>-0.65*</td>
<td>-0.47*</td>
<td>-0.24*</td>
<td>0.45*</td>
<td>0.08</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Start-up incentives</td>
<td>195</td>
<td>0.01</td>
<td>0.02</td>
<td>-0.07</td>
<td>0.04</td>
<td>-0.04</td>
<td>0.00</td>
<td>-0.14</td>
<td>0.05</td>
<td>0.07</td>
<td>-0.09</td>
<td>-0.35*</td>
<td>0.12</td>
<td>0.40*</td>
<td>0.20*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Active measure</td>
<td>181</td>
<td>0.65</td>
<td>0.44</td>
<td>-0.43*</td>
<td>-0.25*</td>
<td>-0.33*</td>
<td>0.15</td>
<td>0.45*</td>
<td>0.15</td>
<td>-0.66*</td>
<td>-0.45*</td>
<td>-0.20*</td>
<td>0.41*</td>
<td>-0.04</td>
<td>0.94*</td>
<td>0.15*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Passive measure</td>
<td>195</td>
<td>0.95</td>
<td>0.68</td>
<td>-0.41*</td>
<td>-0.35*</td>
<td>-0.34*</td>
<td>0.21*</td>
<td>0.39*</td>
<td>0.07</td>
<td>-0.51*</td>
<td>-0.42*</td>
<td>-0.12</td>
<td>0.43*</td>
<td>0.10</td>
<td>0.97*</td>
<td>0.18*</td>
<td>0.84*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Marginal PIT &amp; SSC on GLI</td>
<td>210</td>
<td>37.35</td>
<td>11.93</td>
<td>-0.37*</td>
<td>-0.15*</td>
<td>-0.09</td>
<td>0.10</td>
<td>0.38*</td>
<td>0.22*</td>
<td>-0.48*</td>
<td>-0.46*</td>
<td>-0.26*</td>
<td>0.33*</td>
<td>0.06</td>
<td>0.60*</td>
<td>0.12</td>
<td>0.57*</td>
<td>0.53*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Average PIT &amp; SSC on GLI</td>
<td>208</td>
<td>26.93</td>
<td>9.37</td>
<td>-0.40*</td>
<td>-0.15*</td>
<td>-0.03</td>
<td>0.19*</td>
<td>0.56*</td>
<td>0.04</td>
<td>-0.54*</td>
<td>-0.56*</td>
<td>-0.25*</td>
<td>0.29*</td>
<td>0.18*</td>
<td>0.67*</td>
<td>0.08</td>
<td>0.61*</td>
<td>0.62*</td>
<td>0.84*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>18. Corporate income tax rate (combined)</td>
<td>210</td>
<td>30.59</td>
<td>6.68</td>
<td>-0.09</td>
<td>-0.36*</td>
<td>-0.03</td>
<td>0.24*</td>
<td>0.02</td>
<td>0.23*</td>
<td>-0.06</td>
<td>-0.23*</td>
<td>-0.15*</td>
<td>0.18*</td>
<td>-0.02</td>
<td>0.17*</td>
<td>0.13</td>
<td>0.07</td>
<td>0.19*</td>
<td>-0.02</td>
<td>0.09</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Correlation is significant at *5%; trend is not reported.
**Regression Results**

Table 4 shows regression results using the variables of finance, labor, and tax policy for the TEA rate internationally. The numbers of observations of each regression model are slightly different, because our dataset is unbalanced and combinations of the variables using in each model are diverse. In particular, we present White heteroscedasticity-robust standard errors of the variables in the case of the Model 1 to exclude the problem of heteroscedasticity.

Through the results of the regression models for the TEA rate, we can find various determinants of the level of entrepreneurial activity of the country. The negative and significant coefficients of the trend in all of the models explain that the entrepreneurial activity in the OECD countries shrunk from the year 2000 to 2006. On the other hand, the real GDP growth positively and significantly affects the TEA rate, analogous to the results in some part of the previous studies (Wennekers et al. 2005; van Stel, Storey, and Thurik 2007; Levie and Autio 2008). This finding supports our expectation that an environment for start-up activity and a personal willingness to create a business can be improved as the national economy is growing. These two control variables have significant and consistent effects on the TEA rate in all of the models.

In the finance policy region, positive and significant effects of the short-term interest rate on the TEA rate in all of the models are not expected. On the other hand, the variable of household investment fund shares positively and significantly affects the TEA rate in the Model 1 and Model 2. In the case of the government expenditure, the total expenditure has no relationship with the TEA rate, while some subordinate expenditures show significant coefficients for the TEA rate. The expenditure on economic affairs and education positively and significantly affect the TEA rate, while the expenditure on general public services negatively and significantly affects the entrepreneurial activity. There is no significant relationship between the expenditure on public order and safety and the TEA rate. This
finding supports the importance of national investment on economic affairs and education in a short-term and a long-term point of view, respectively, while the expenditure on public services is inefficient to promote entrepreneurial activity.

Among the variables of labor policy, the unit labour cost has no significant effect on the TEA rate, while the unemployment rate in the past year partly and negatively affects the TEA rate in the current year (from the Model 1 to the Model 4). During the economic recession, the tendency of decrease in the entrepreneurial activity with an increase in the unemployment rate shows that the people who are laid off from the jobs or have experienced failures in their business hesitate to create the new business. On the other hand, interestingly, we find that most of the public expenditures on various LMPs cannot help to enhance the level of entrepreneurial activity. However, the expenditure on start-up incentives, which is a direct supportive instrument for start-up activities, positively affects the level of entrepreneurship. From the results of the Model 3 to the Model 6, we find that 0.01 percent increase of the public expenditure on start-up incentives as a percentage of national GDP can raise the TEA rate by 0.2 percent.5

In the case of tax policy, regression results of the variables are not consistent across the models. In the Model 1 and the Model 2, both the marginal and the average of PIT and SSC on GLI negatively affect the TEA rate, while they are not significant in the Model 3 to the Model 6. In addition, the corporate income tax rate does not affect the entrepreneurial activity except for the Model 6.

Through the regression analysis, we find some interesting results. To promote the national level of entrepreneurial activity (the TEA rate), the government should try to increase the real GDP growth rate and expand the public expenditures on economic affairs and education, in particular. In addition, the government should focus on the expenditure on start-up incentives,

5 The average public expenditure on the start-up incentives of the OECD member countries is merely 0.01 percent of the national GDP, and the maximum value of this variable among our sample is 0.13 percent.
<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)**</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>Std. error</td>
<td>Coeff.</td>
<td>Std. error</td>
<td>Coeff.</td>
<td>Std. error</td>
</tr>
</tbody>
</table>
| Trend                           | -0.382** | 0.152   | -0.436*** | 0.153   | -0.374*** | 0.140   | -0.370*** | 0.141   | -0.375*** | 0.136   | -0.367*** | 0.136   
| Real GDP growth                 | 0.393** | 0.168   | 0.376**  | 0.166   | 0.326**  | 0.147   | 0.331**  | 0.149   | 0.255*    | 0.150   | 0.258*    | 0.149   |
| Finance Policy                  |        |         |         |         |         |         |         |         |           |         |           |         |
| Short-term interest rate        | 0.731*** | 0.149   | 0.755**  | 0.147   | 0.430*** | 0.148   | 0.441*** | 0.149   | 0.395**   | 0.160   | 0.359**   | 0.170   |
| Household investment fund shares| 0.222*** | 0.071   | 0.233*** | 0.070   | 0.055    | 0.075   | 0.057    | 0.077   | 0.081     | 0.078   | 0.063     | 0.082   |
| Government expenditure (total)  | 0.059   | 0.061   | 0.088    | 0.063   |         |         |         |         |           |         |           |         |
| General public services         | -0.171*** | 0.060   | -0.157*** | 0.060   | -0.142** | 0.060   | -0.129** | 0.060   |           |         |           |         |
| Public order and safety         | -0.195   | 0.287   | -0.206   | 0.289   | -0.010   | 0.268   | -0.015   | 0.267   |           |         |           |         |
| Economic affairs                | 0.210*** | 0.079   | 0.213*** | 0.080   | 0.215**  | 0.086   | 0.239*** | 0.091   |           |         |           |         |
| Education                       | 0.617*** | 0.108   | 0.605*** | 0.108   | 0.585*** | 0.109   | 0.602*** | 0.113   |           |         |           |         |
| Labor Policy                    |        |         |         |         |         |         |         |         |           |         |           |         |
| Unit labour cost                | -4.460  | 3.210   | -2.141   | 3.362   | 3.006    | 3.730   | 2.230    | 3.765   | 0.614     | 3.775   | -0.027     | 3.863   |
| Unemployment rate               | -0.193** | 0.096   | -0.182*  | 0.095   | -0.150*  | 0.079   | -0.161*  | 0.078   | -0.030    | 0.100   | -0.009     | 0.106   |
| Public expenditure on LMP (total)| -0.391  | 0.293   | -0.233   | 0.306   |         |         |         |         |           |         |           |         |
| Active measure                  | -1.700** | 0.737   | -1.758** | 0.765   |         |         |         |         |           |         |           |         |
| Passive measure                 | -0.950*  | 0.505   | -1.196** | 0.603   |           |         |           |         |           |         |           |         |
| Tax Policy                      |        |         |         |         |         |         |         |         |           |         |           |         |
| Marginal PIT & SSC on GLI       | -0.053** | 0.027   | 0.036    | 0.026   | 0.038    | 0.031   | 0.077    | 0.056   |           |         |           |         |
| Average PIT & SSC on GLI        |        |         |         |         |         |         |         |         |           |         |           |         |
| Corporate income tax rate (combined) | 0.068 | 0.055   | 0.062    | 0.055   | 0.075    | 0.051   | 0.072    | 0.051   | 0.083     | 0.051   | 0.085*     | 0.051   |
| Mean VIF                        | 2.190   | 2.420   | 2.610    | 2.710   | 2.700    | 3.140   | 3.140    | 3.140   |           |         |           |         |
| Adjusted R²                     | 0.587   | 0.598   | 0.667    | 0.664   | 0.634    | 0.635   | 0.635    | 0.635   |           |         |           |         |
| N                               | 99      | 99      | 97       | 97      | 101      | 101     | 101      | 101     |           |         |           |         |

Significant at *10%, **5%, ***1%.

* Standard errors in the model (1) are heteroscedasticity-robust.
which directly supports the start-up activities among the labour market programmes. On the other hand, it is important to reduce the tax burden on the individual income and social security contribution for promoting entrepreneurial activity at the national level.

*Comparison Analysis on Public Policy Measures and Policy Implications for Promoting Entrepreneurship*

**Comparison of the Public Policy Measures among the OECD Countries**

From the regression results, we can find some important policy measures which positively affect the national level of entrepreneurial activity. However, because the procedure for establishment and the environment for implementation of the finance, labor, and tax policy to promote entrepreneurship vary with the countries, we can anticipate that there are differences on between their policy measures’ significances and effects. Therefore, in this section, we divide 28 OECD member countries of our sample into four groups based on the GDP per head (low GDP and high GDP) and the TEA rate (low TEA and high TEA).\(^6\)

Table 5 shows the four groups of the OECD member countries classified by the GDP per head and the TEA rate. The group of the countries with high GDP and high TEA, and with high GDP and low TEA are termed ‘Group 1’ and ‘Group 2’, and the group of the countries with low GDP and high TEA, and with low GDP and low TEA are termed ‘Group 3’ and ‘Group 4’, respectively, for our convenience.

The classification definitely shows geographical characteristics. In particular, the Group 2 consists of Western and Northern European countries which we recognize them as ‘developed

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\(^6\) As mentioned above, because the TEA rates of Luxembourg and Slovak Republic among the OECD members do not observed, we only considered 28 OECD member countries in our analysis. The classification breaks were based on an investigation of the actual distribution of the two indices and selecting those breaks where a large gap in the distribution. As a result, the numerical cutline of the GDP per head (US dollar, constant prices, constant PPPs, reference year 2000) and the TEA rate are 25,000 U.S. dollars and seven percent, respectively. The time period of this analysis also covers from the years 2000 to 2006.
Table 5

Four Groups of the OECD Countries with the GDP per Head and the TEA Rate

<table>
<thead>
<tr>
<th>High GDP per head</th>
<th>High TEA rate</th>
<th>Low TEA rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia, Canada, Iceland, Ireland, Norway, United States (six countries)</td>
<td>‘Group 1’</td>
<td>‘Group 2’ Austria, Belgium, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, United Kingdom (12 countries)</td>
</tr>
<tr>
<td>Low GDP per head</td>
<td>‘Group 3’ Czech Republic, Korea, Mexico, New Zealand, Poland (five countries)</td>
<td>‘Group 4’ Greece, Hungary, Portugal, Spain, Turkey (five countries)</td>
</tr>
</tbody>
</table>

countries’, except for Japan. The Group 1 has developed countries which are not located in continental Europe. United States and Canada are in North America, and Australia is in Oceania. The Group 3 consists of two Eastern European countries (Czech Republic and Poland), Korea in Asia, Mexico in North America, and New Zealand in Oceania. The countries in the Group 4 are European countries in the Iberian Peninsula, Eastern Europe, and southeast Europe. These definite geographical differences between the groups are interesting.

The groups with low TEA (Group 2 and Group 4) consist of European countries which are almost in the European Union (EU), while the groups with high TEA (Group 1 and Group 3) have geographical diversities, such as non-Western Europe, North America, Asia, and Oceania. Why the entrepreneurial activities of European countries, which are recognized as developed countries, are depressed?

Comparing the public policy measures between the groups, we can suggest the policy for promoting entrepreneurship by group. In addition, we explore how the entrepreneurship policy should be changed according to the economic level of the country. Table 6 represents the average values of the variables, which are used in the regression analysis in the previous section, by group.
Table 6
Comparison of the Public Policy Measures by Group

<table>
<thead>
<tr>
<th>Controls and Public Policy Measures</th>
<th>Mean Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group 1</td>
</tr>
<tr>
<td>TEA rate</td>
<td>10.55</td>
</tr>
<tr>
<td>GDP per head(^a)</td>
<td>32666.43</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>3.58</td>
</tr>
<tr>
<td>Finance policy region</td>
<td></td>
</tr>
<tr>
<td>Short-term interest rate</td>
<td>4.89</td>
</tr>
<tr>
<td>Household investment fund shares</td>
<td>9.01</td>
</tr>
<tr>
<td>Government expenditure (total)</td>
<td>15.71</td>
</tr>
<tr>
<td>General public services</td>
<td>14.16</td>
</tr>
<tr>
<td>Public order and safety</td>
<td>3.93</td>
</tr>
<tr>
<td>Economic affairs</td>
<td>11.48</td>
</tr>
<tr>
<td>Education</td>
<td>16.13</td>
</tr>
<tr>
<td>Labor policy region</td>
<td></td>
</tr>
<tr>
<td>Unit labour cost</td>
<td>0.56</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>4.95</td>
</tr>
<tr>
<td>Public expenditure on LMP (total)</td>
<td>1.11</td>
</tr>
<tr>
<td>Start-up incentives</td>
<td>0.01</td>
</tr>
<tr>
<td>Active measure</td>
<td>0.46</td>
</tr>
<tr>
<td>Passive measure</td>
<td>0.65</td>
</tr>
<tr>
<td>Tax policy region</td>
<td></td>
</tr>
<tr>
<td>Marginal PIT &amp; SSC on GLI</td>
<td>35.51</td>
</tr>
<tr>
<td>Average PIT &amp; SSC on GLI</td>
<td>24.00</td>
</tr>
<tr>
<td>Corporate income tax rate (combined)</td>
<td>28.69</td>
</tr>
</tbody>
</table>

\(^a\) US dollar, constant prices, constant PPPs, reference year 2000.

First, we examine important factors which cause the difference on the TEA rate between the Group 1 and the Group 2, which consist of the countries with high GDP per head. The real GDP growth rate is 1.45 percent higher for the Group 1 than the Group 2. There is no difference on the total government expenditure between the two groups, while it is interesting that the governments in the Group 1 expend much more money on economic affairs and education. We conducted statistical tests of the difference on the average of all of the variables across the groups.
education than the Group 2 (see Figure 1). This finding is consistent with the result from regression analysis in the previous section. On the other hand, it is also interesting that the unit labour cost of the Group 1 is much lower than that of the Group 2. In the case of the public expenditure on LMP, there is no difference on the start-up incentives between the Group 1 and the Group 2, while the expenditures on the active measures and the passive measures of LMP of the Group 1 countries are much lower than those of the Group 2 countries (see Figure 2). This finding supports that the public expenditure on LMP does not positively affect entrepreneurial activity. In the tax policy region, both personal tax rate and corporate tax rate of the Group 1 are much lower than those of the Group 2 (see Figure 3).

Second, we investigate differences between the Group 3 and the Group 4, which consist of the countries with low GDP per head. There are no differences on the real GDP growth and short-term interest rate between the two groups. On the other hand, the governments in the Group 4 spend much more money than those in the Group 3, on average. In the Group 4, the portion of the expenditure on the general public services is the largest among the four functions of the government expenditure, while the countries in the Group 3 focus the government expenditure on the function of economic affairs and education (see Figure 4). On the other hand, there are no differences on the unit labour cost and the unemployment rate, unlike the result of the comparison of two groups with high GDP. In the public expenditure on LMP, there is no difference on the expenditure on start-up incentives, which is a small part of total expenditure on LMP, between Group 3 and Group 4, like the results of high GDP groups. However, the expenditures on active and passive measures of the Group 3 are much lower than those of the Group 4 (see Figure 5). In the countries of the Group 4, the public expenditure on LMP is even larger than the Group 1 as well as the Group 2. This finding supports the regression result of negative effect of the expenditure on LMP in the previous

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8 The average of the short-term interest rate in the Group 4 countries is 4.62 percent, if the data of Turkey is excluded.
section. In the tax policy measures, the marginal and average PIT and SSC on GLI of the Group 3 is lower than those of the Group 4, while there is no difference on the average of the corporate tax rate between the two groups (see Figure 6).

Third, we consider differences on public policy measures between the Group 1 and the Group 3, which have different economic level (real GDP per head) and similar level of entrepreneurial activity (TEA rate). There are large differences on the household investment fund shares and the total government expenditure per capita, of course, due to the different economic level. However, we can find a structural difference on the functional expenditures by government between the two groups. These two groups mainly and commonly focus on economic affairs and education, while the Group 1 with high GDP prefers the expenditure on education, and the Group 3 with low GDP concentrates the expenditure on economic affairs. We can interpret that this interesting result is for characteristics of these two functional expenditures, which are important determinants of the entrepreneurial activity. In detail, in the countries with high GDP, the expenditure on education, an indirect and long-term instrument, is more efficient than the expenditure on economic affairs, which is a direct and short-term instrument in promoting entrepreneurial activity, while the expenditure on economic affairs is more efficient and more direct in enhancing entrepreneurship in the countries with relatively low GDP. On the other hand, the countries of the Group 3 have lower marginal and average PIT and SSC on GLI than the countries of the Group 1. Therefore, through the results of comparison of public policy between the Group 1 and the Group 3, we can find that lowering personal income tax rate and social security contributions and reducing inefficient expenditures on LMPs by the government are important on promoting entrepreneurial activity, even if the country is on relatively low economic level.
Figure 1
Government Expenditures on Economic Affairs and Education of the Countries with High GDP

Notes: Australia in the Group 1 and Switzerland in the Group 2 are excluded in the graph, because they have no data. The unit is a percentage of the total government expenditure.

Figure 2
Public Expenditure on LMP of the Countries with High GDP

Notes: Iceland in the Group 1 is excluded in the graph, because it has no data. Total public expenditure on LMP is represented as the sum of the expenditure on the active and passive measures of LMP. The unit is a percentage of the GDP.
Figure 3
Personal and Corporate Tax Rates of the Countries with High GDP

Note: The unit is a percentage.

Figure 4
Government Expenditures on General Public Services, Economic Affairs, and Education of the Countries with Low GDP

Notes: Mexico in the Group 3 and Turkey in the Group 4 are excluded in the graph, because they have no data. The unit is a percentage of the total government expenditure.
Notes: Greece and Turkey in the Group 4 are excluded in the graph, because they have no data. The public expenditure on passive measures of LMP of Mexico is nearly zero (less than 0.005 percent). Total public expenditure on LMP is represented as the sum of the expenditure on the active and passive measures of LMP. The unit is a percentage of the GDP.

Note: The unit is a percentage.
Policy Implications

Integrating the results in the previous section, we can suggest clear directions of public policy for promoting entrepreneurship by group. Generally, the countries with low TEA rate should focus the government expenditure on economic affairs and education, rather than general public services, in the region of finance policy. In the labor policy, they should reduce inefficient public expenditures on LMP. They should also lower the individual tax rate and social security contributions on the gross labour income in the tax policy.

We suggest customized directions of public policy for enhancing entrepreneurship by group. First, in the countries of the Group 1 with high GDP and high TEA, the government expenditure on economic affairs rather than general public services should be raised. In addition, the countries of the Group 1 should increase the public expenditure on start-up incentives rather than the other labour market programmes. On the other hand, they should reduce the total government expenditure, lowering tax burdens of the individual and the corporation.

The Group 2 mostly consists of important member countries of the EU, so that concurrent coordination of the public policy for promoting entrepreneurship across the countries is needed. The countries in the Group 2 should try to grow their economies first. However, they have to control the amount of the total government expenditure, by increasing the expenditure on economic affairs and education and reducing the expenditure on general public services. They should also try to reduce the unit labour cost through appropriate policy instruments. In the case of the public expenditure on LMP, they should drastically reduce the amount of the total expenditure, while they should increase the expenditure on start-up incentives. In the tax policy, reducing the burden of individual tax and social security contributions, in particular, plays an important role in the promoting entrepreneurial activity.

The level of entrepreneurial activity of the countries in the Group 3 is increasing along
with high economic growth rate. However, to sustain high level of entrepreneurial activity for a long time, they should move their attentions from the economic affairs to the education in terms of the government expenditure. In addition, they need to consider the reduction of the corporate tax rate, which is relatively higher than the average personal tax rate.

The countries of the Group 4 have relatively lower GDP per head than the countries of the Group 2 however they are also members of the EU except for Turkey. Therefore, the unity of the public policy in the EU can prevent the countries in the Group 4 growing their economies and promoting entrepreneurial activity. However, they should try to reduce the expenditure on general public services as much as possible, and invest more in economic affairs and education. In addition, they should lower individual tax rate and social security contributions.

**Conclusion**

In this paper, we examined the relationship, across 28 OECD countries, between public policy and entrepreneurship using regression methods, and suggested customized public policies to the countries in different phase of economic development for promoting entrepreneurship by classifying the countries into four groups. In order to estimate the effect of public policy on entrepreneurial activity at the national level, we selected three major policy regions – finance, labor, and tax policy, and collected the data of the policy measures in these three regions from OECD database. On the other hand, we used the TEA index developed by GEM as a measure of the national level of entrepreneurial activity.

From the empirical analysis, we can find some interesting results. The entrepreneurial activity shrunk from the years 2000 to 2006 among the OECD countries. As the real GDP growth rate increases, the TEA rate increases. Among public policies, first, in the finance policy region, the government expenditure on economic affairs and education, rather than general public services, leads higher entrepreneurial activity. Second, in the labor policy
region, the public expenditure on the start-up incentives among labour market programmes only positively affects entrepreneurial activity. Third, in the tax policy region, as personal income tax rate and social security contributions decrease, the TEA rate increases.

Classifying the OECD countries into four groups based on the GDP per head and the TEA rate, we find geographical characteristics and differences on finance, labor, and tax policy across the groups. In addition, it is possible to suggest customized public policies by group for promoting entrepreneurial activity.

In conclusion, to promote entrepreneurship of the country, the government should pursue sustainable and stable economic growth, and concentrate limited budget on the expenditure on economic affairs and education. In particular, the government expenditure on education plays an important role in long-term growth of entrepreneurial activity and leap of the national economic level. On the other hand, the government should hold down expenses to various labour market programmes, while it should increase the expenditure on the start-up incentives. Efficient management on the government expenditure by reducing the burden of personal tax can enhance the level of entrepreneurship in the country.

**References**


Links between Firm Technology Orientation (TO) and Entrepreneurial Orientation (EO)

Boris Urban

Abstract
The study examines entrepreneurship and its relation with technology, which is often conceptualized as entrepreneurial orientation (EO) and technology orientation (TO). Building on previous research the main constructs under investigation are operationalised, and the study is further contextualized by including measures of environmental dynamism and hostility. A survey is used to collect data from a population of diverse businesses in the Johannesburg area, yielding a sample of 236 firms. After validating the measures, correlational analyses are used to test the hypothesized associations. Findings reveal significant correlations between EO and environment hostility and dynamism, but not between EO and TO.

Introduction
Entrepreneurship and its relation to technology and innovation is studied extensively within organizations (Bosma, Jones, Autio, and Levie 2007; Foba and De Villiers 2007; Lee and Wong 2004). Recent studies have advocated integrating innovation and technology at organizations where links have been established with firm performance (Bhuian, Menguc, and Bell 2005; Guan and Liu 2007). Firms which have adopted a technology orientation (TO) pursue advances in technology and innovations, and investments are made in discontinuous innovations and disruptive technologies with the assumption that entire new markets will emerge (Schindelhutte, Morris, and Kocak 2008).

In emerging economies, such as South Africa, where growth is often the primary goal of organizations, innovation in firms can be particularly critical for firm profitability and survival (Antonicic and Hisrich 2001). The 21st century is tilting towards an economy primarily driven by technology and knowledge, where entrepreneurs have to recognize and anticipate high-technology opportunities so as to join the ranks of future entrepreneurial leaders (Kourilsky and Walstad 2002).

Technology and firm innovation can not only create value but can aid in the international expansion process which many firms in emerging countries are now
undertaking. A strong technology and entrepreneurial orientation at the firm level can provide the necessary competitive advantage for companies in emerging countries to compete globally (Rwigema, Urban, and Venter 2008).

Not only are organizations seeking to re-orientate themselves to become strategically innovative (McGuigan and Henderson 2005), but previous literature and empirical findings, point to entrepreneurial orientation (EO) as an important element in organizational and economic development. Entrepreneurship within organizations is a fundamental posture, instrumentally important to strategic innovation, particularly under shifting external environmental conditions (Knight 1997). The EO construct is salient not only for large organizations but also for small and medium-sized organizations, under different stages of economic development, in varied cultural contexts. At the level of the organization, entrepreneurship can provide direction to the company’s entire operation, serves as an integral component of a firm’s strategy, and may serve as the core component of corporate strategy (Chen, He, and Jin 2008; Guan and Liu 2007; Morris, Kuratko, and Covin 2008). Entrepreneurial actions are the bedrock of entrepreneurial processes and behaviour.

These two dominant orientations, TO and EO often termed as strategic orientations at the firm level provide the focus for this study. Since these orientations may be critical to the long term survival of a firm (Stevenson 1983), it is important to facilitate the empirical study of them. This paper moves in this direction by empirically testing the relationship between EO and TO. However simply examining the direct EO-TO relationship may provide an incomplete picture and it is necessary to understand how environmental factors might be linked with each orientation (Wang 2008). Research suggests that a key part of a TO is the interaction of that strategy with the ventures external environment (Zahra and Bogner 1999). Moreover, EO is affected by, and must also fit the firm’s particular environment.
Consequently for this present study, associations between EO and TO and environmental hostility and dynamism are hypothesized.

Despite the weight of positive empirical findings and observations that EO and TO are strategic imperatives (Antoncic 2006; Autio 2005; Goel et al. 2003), there is a danger that firms in Africa are lagging behind, and subsequently a study of this nature aids in understanding these imperatives. Another reason for focusing on EO is that although studies using the EO scale have often been replicated, the majority of research in entrepreneurship and technology has been conducted in the United States, and with the relevance of international entrepreneurship being recognized (Jantunen, Puumalainen et al. 2005), the importance of further interrogating EO and TO in an emerging country context seems justifiable.

**Review of Theory**

**Entrepreneurial orientation**

The term entrepreneurship in corporations has been labelled in many different ways, which includes intrapreneurship (Antoncic and Hisrich 2001; Kuratko 2002); innovation entrepreneurship (Schumpeter 1934); innovation management (Drucker 1979); venture entrepreneurship (Tang & Koveos 2004); corporate intrapreneurship (Dess, Ireland, Zahra et al. 2003); strategic entrepreneurial posture (Covin & Slevin, 1989), and internal corporate venturing (Hornsby, Kuratko, and Zahra 2002).

Prior theory and research (Covin and Slevin 1989; Lumpkin and Dess 1996; Khandwalla 1977; Miller and Friesen 1983) indicates that an EO is a key ingredient for organizational success, and has been found to lead to increased performance (Kuratko, Ireland, and Hornsby 2001; Wiklund and Shepherd 2003; Zahra and Covin 1995).
The concept of EO incorporates the firm-level processes, practices and decision-making styles of innovate firms (Lumpkin and Dess 1996). The theoretical basis of the EO construct lies in the assumption that all firms have an EO, even if levels of EO are very low. The extant organizational research provides theoretical support for the EO construct, in both the fields of entrepreneurship and strategic management.

Extensive research confirms that EO has three dimensions: innovativeness, risk taking, and proactiveness (Covin and Slevin 1989, 1991, 1997; Kreiser et al. 2002; Lumpkin and Dess 1996, 2001). Innovativeness is the fundamental posture of an entrepreneurial organization in terms of developing new products or inventing new processes (Drucker 1979; Schumpeter 1934). Innovativeness as an attribute describes an organizations’ willingness to add newness with added value. Risk-taking is associated with the willingness to commit significant resources to opportunities and to take calculated business risks (Aloulou and Fayolle 2005). Proactiveness is perseverance in ensuring initiatives are implemented, and is concerned with adaptability and tolerance of failure. These dimensions have been extensively documented, and according to Lumpkin and Dess (1996), all the dimensions are central to understanding the entrepreneurial process, although they may occur in different combinations, depending on type of entrepreneurial opportunity the firm pursues.

Firms can only be labelled as entrepreneurial if they are simultaneously risk taking, innovative, and proactive (Covin, Green, and Slevin 2006).

The extent to which each of these dimensions is useful for predicting the success of business may be contingent on industry environment, and norms for EO can be expected to vary among industries. Lumpkin and Dess (1996) provide a contingency perspective on how environmental and organizational factors moderate, mediate, independently effect, or interact with EO to enhance firm performance (Jantunen, Puimalainen et al. 2005). Typically, firms
with an EO tend to outperform similar other organizational types in volatile environments (Knight 1997).

Summing up the literature on EO, this concept is best understood as a complex mix of personal and situational factors and in addition to individual and firm differences, forces operating within other larger cultural contexts also determine levels of EO (Aloulou and Fayolle 2005; Urban 2008).

Environmental Factors

As with previous studies (Zahra and Bogner 1999), the present study emphasizes environmental characteristics since these perceptions activate technology and entrepreneurial choices. Theory on the environment and its effect on high technology ventures and EO are well documented (Allen and Stearns 2004; Pownall and Lawson 2005). Specifically, the entrepreneur’s perception of the external environment is expected to moderate the relationship between a technology venture’s strategy and its financial performance (Zahra and Bogner 1999).

Three characteristic of the firm’s external environment are discussed in the literature: dynamism, hostility, and heterogeneity; these characteristics reflect an industry’s objective conditions. The present study relies on two environmental dimensions which is consistent with earlier research and theory building in the field of entrepreneurship:

(1) Dynamism. Dynamism reflects both the rate and unpredictability of change in the industry (Dess and Beard 1984). These changes result from the entry or exit of competitors, changes in customer’s needs, and shifts in technological conditions. These changes create opportunities and threats for new ventures and compel their managers to act by building and leveraging technological resources. The unpredictability of these changes can also influence managers’ investment in introducing new products and timing of their release (Porter 1985).
(2) Hostility. Hostility indicates an unfavourable business climate, such as the intense competition for resources or market opportunities. Hostility arises from the existence of too many competitors, unfavourable supply conditions, and strict regulation. Hostile environments are therefore resources-poor, lean environments; they lack the abundance of resources and capacity needed to support a large number of ventures (Dess and Beard 1984; Zahra and Bogner 1999).

**Technology Orientation**

Technology and innovation in entrepreneurial businesses is typically explained in a variety of ways. For instance (1) by describing how early-stage entrepreneurs and established business owner-managers focus on the novelty (or unfamiliarity) of their products or services relative to customers’ current experience (Bosma et al. 2007), or (2) through focusing on levels of innovativeness in entrepreneurial businesses as measured by the degree of competition faced by the business, or (3) whether the owner-manager perceives that many, few, or no other businesses offer similar products or services (Lee, Lee, and Penning 2001).

Several types of new venture technology and innovation strategies are proposed in the literature; these include but are not limited to: (i) reactive imitation, (ii) proactive localization, (iii) import substitution, (iv) creative imitation, (v) early-market entry, (vi) global niche, and (vii) global innovation (Park and Bae 2004). Strategic choice is of particular concern to technology-based ventures. For instance they can adopt a product market strategy aimed at achieving growth in terms of revenues or a strategy where the objective is growth in the value of the technology with a view to an eventual exit through-sale to strategic partner. A firm pursuing a strategy of differentiation based on innovative new product introductions might benefit from the human capital development though years of experience in technical jobs. Such experience would provide insights into technical advances that might enhance
product features (Shrader and Siegel 2007). Developing new product technology and concern for technical expertise demonstrates the importance for technology-based new ventures to select strategies which they can successfully execute. It has also been suggested that true measures of success for technological entrepreneurs is the extent to which they are able to develop and bring to market radically innovative new products and/or services. Radical innovations are important not only for the positive economic impact they typically create, but also because they fundamentally change the behaviour of consumers.

Evaluating regional transformation through technological entrepreneurship, Venkataraman (2003) analyses how in a modern economy universities and research and development laboratories are the incubators of novel technical ideas; it is not an accident that areas around Boston and Silicon Valley have produced a significant amount of wealth. Infusing an enterprising spirit into technical endeavours and the promotion of inventive skills has been implemented as an impetus to promote technopreneurship in organisations (Lee and Wong 2004).

Both entrepreneurs and technopreneurs have similar qualities, such as: determination, willingness to take risk, capacity to mobilize resources, and perseverance to overcome setbacks. However the capabilities required of a technopreneur go beyond this to include an expert knowledge of relevant technological developments together with innovative acumen (Wong, Cheung, and Venuvinod 2005). It is a person’s specific knowledge which is apparently the most important contributing factor in making a discovery and exploitation of wealth generating ideas (Fiet, Norton, and Clouse 2002). Technopreneurs are an important group that can contribute significantly to raise national competitiveness, productivity and efficiency (Conway 2008). In addition technopreneurs engage in go-to-market programs through a global network of partners (Asia Africa Intelligence Wire 2005).
Technopreneurism can be integrated into corporations through the formal strategy process. Foo and Foo (2000) conceptualize a model of corporations in Singapore acting to contribute towards configuring a unique environment congenial for sprouting technopreneurs. In Singapore, government built technological parks and research centres to encourage more firms to be involved in research and development activities; here the government set aside billions of dollars in research funds and venture capital to encourage research in technologically related industries to become technopreneurs (Lee and Wong 2004).

The integration of entrepreneurship with strategy (TO) relies on the critical aspects of entrepreneurial strategy and a strategy for entrepreneurship (Kuratko and Audretsch 2009; Morris et al. 2008). Hamel (2000) argues that, all forms of complexity, (entrepreneurship or strategy) are poised on the border between perfect order and total chaos, between absolute efficiency and blind experimentation, between autocracy and complete adhocracy. It is conceivable that in many situations a firm would have to excel along all or most of the dimensions of EO in order to achieve the ability to create superior value vis-a-vis TO. This would indicate that there are significant associations between EO and TO.

**Hypotheses**

The following hypotheses are formulated by drawing on the emerging aforementioned body of knowledge. Given the lack of empirical evidence on EO and TO in terms of environmental dynamism and hostility, particularly in emerging country context, instead of numerous hypotheses, the study formulates broad spanning hypotheses which allow for general explanations:

H1: A positive correlative relationship exists between EO and TO.
Entrepreneurship within organizations as a fundamental posture is conceived as EO, which is instrumentally important to a firm which adopts a technology orientation (TO), that is, a firm that is characterized by discontinuous innovations and disruptive technologies with the assumption that entire new markets will emerge (Schindehutte, Morris, and Kocak 2008).

H2: TO and EO will be significant associated with environmental dynamism and hostility. The greater the environmental dynamism and hostility the greater the levels of TO and EO in a firm.

Myers and Marquis (1969) report that the more dynamic and hostile (that is, competitive) the environment the greater the need for innovation and the more likely that firms will be entrepreneurial, in this case increased levels of TO and EO. An environment characterized as dynamic creates opportunities and threats for new ventures and managers react by investing in and leveraging technological resources. The unpredictability of these changes can also influence the firms EO. Hostility is indicative of an unfavourable business climate, typically more competitive where firms will need to adopt a TO and EO to remain competitive.

**Research Methods**

A cross-sectional research design using a survey to generate quantitative responses was used. As TO and EO refer to a mangers self-perception of a firm’s strategic orientation, their self-perception should be closely related to the behaviour of the firm. Hence, as Wiklund (1999) argues, what is really measured is the chief executive officer’s (CEO’s) self-perception and accordingly serves as a relevant proxy for measuring EO and TO.
Although regarded as a micro-level unit of analysis, the firm is an aggregate of different individuals and business activities, and the issues of relevance, size, size distributions, and heterogeneity need to be acknowledged (Davidsson 2004). Due to the variety of industry and firm heterogeneity anticipated in this present study, concerns of broad applicability versus perfect suitability for narrower groups were addressed. Measures that apply to all firms may at the same time apply to none, since they only capture a tiny fraction of each firm’s manifestation of EO (Davidsson 2004). To counteract such discrepancies the instruments were carefully operationalised and are described in detail.

Consistent with previous studies (Wiklund 1999) control variables included, the type of industry – based on the Standard Industrial Classification (SIC) index, firm age, and size of firm in employee numbers. Other intervening factors that may have moderated /mediated the relationship between the study variables are partially accounted for by measuring the direct effect of the environment.

**Sample**

Operalization of the “empirical firm” included firms that were legal entities – close corporations, and private and public companies. A suitable sampling selection criterion was used where the minimum size criterion of a firms sampled was set at 20 employees and the upper limit was set at 500 employees (here a single respondent still can report for entire firm), which then overlaps with the criterion for relevance. This upper limit set also allowed for filtering out of the largest firms, and presumably eliminated some of the typical organizational inertia characteristics of large firms, which may bias EO indicators (Jantunen et al. 2005).

Using these selection criteria, the surveyed population was based on a comprehensive membership list of businesses operating in the Johannesburg area. All potential respondents
were based in the Gauteng province, the economic hub of South Africa, which has the highest number of businesses, the province also accounts for almost half of all enterprises in South Africa. The sampling frame was identified from the Johannesburg Chamber of Commerce and Industry (JCCI) database of businesses operating in the greater Johannesburg area (JCCI 2008). A wide range of businesses were sampled which included various industry sectors. The population of this database is approximately 1600 firms. Based on eligibility criteria and employing a non-probability judgemental sampling technique, 755 potential respondents were surveyed. Judgemental sampling is used when a sample is selected where certain judgements are made on the overall population. The frame selection process for this study can be viewed as a trade-off between practical considerations on the one hand and the demands of randomization and generalizability on the other. Davidsson (2004) suggests that firms are heterogeneous along many dimensions, and that one should acknowledge the heterogeneity, that is, to allow for samples to have reasonable and balanced representation of different kinds of valid empirical manifestations of the theoretical concept ‘firm’. Consequently, due to the heterogeneity of the several different industry sectors sampled, the generalizability of this study is strengthened. Moreover the important issue about sampling, in general, is not statistical but theoretical representativeness, that is, the elements in the sample represents the type of phenomenon that the theory makes statements about (Davidsson 2004).

A compact disk of the total membership database was obtained, and the necessary access codes received, allowing access to the total population with their respective contact details. Once permission was obtained with the Chamber offices, questionnaires were solicited electronically with periodic reminder telephone calls. A number of respondents indicated that not all items were applicable to their situation and subsequently these responses
were assigned as missing data. Based on these procedures and suitability of respondents 230 usable responses were generated as the final sample (30.5 percent response rate).

**Measures**

The measures for EO, TO and environmental dynamism and hostility relied on previously established instruments. The EO dimensions have evolved from the ENTRESCALE, which was derived at by identifying the innovative and proactive disposition of managers at firms. This scale initially developed by Khandwalla (1977), refined by Miller and Friesen (1983), and Covin and Slevin (1989), has been found to be highly valid and reliable at cross-cultural levels (Knight 1997). Although alternative EO conceptualizations are to be found (Brown et al. 2001), and have demonstrated some usefulness, Davidsson (2004) suggests using the existing EO measure which has the advantage of, theoretical backing, a multidimensional construct, and theoretically meaningful relationships established in previous studies, thus allowing for more refined knowledge to evolve. Subsequently, EO was measured along a seven-point bi-polar Likert scale, represented by the three dimensions of innovation, proactiveness, and risk taking. Respondents had to circle number “1” if the statement on the left hand side of the scale best describes your reaction to the item, or circle number “7” if the statement on your right hand side of the scale best describes your reaction to the item. Moreover an aggregated measure of EO can be useful when a differential relationship between the three dimensions and other variables under investigation are not expected (Kreiser et al. 2002), as was the case for this present study.

In order to operationalise a firm’s level of TO, several different dimensions of technology which are generally considered to be most relevant to organisation’s technology strategy were used. To allow for meaningful comparisons with earlier work, a core set of questions based on technology and competitive strategies from the panel study of
entrepreneurial dynamics (PSED) (Gartner, Shaver, Carter, and Reynolds 2004) survey were selected. The PSED provides systematic, reliable data on those variables that explain and predict nascent entrepreneurship. Measures for TO were based on categories which divide firms into three types (Allen and Stearns 2004), namely: (1) First mover (a pioneering entrepreneur with a disruptive technology that creates a new paradigm) – operationalised with surrogate variable – was the product/service available 5 years ago? (2) Practioner strategy (entrepreneur employs current technology to improve products, services, or processes) (3) Innovator strategy (an incremental strategy whereby entrepreneur modifies or improves existing technology). For measures on the environment, the environmental dimensions of hostility and dynamism were selected due to the modest correlations reported between these two dimensions (Zahra 1993), suggesting that unique aspects of the environment are captured with each dimension. Environmental dynamism (5-items) and hostility (6-items) were measured using a 7-point scale, representing 1 = if you strongly agree with the statement and 7 = if you strongly disagree with the statement. Respondents were asked to circle numbers ‘2’ through ‘6’ depending upon their best estimate of an intermediate position. Furthermore respondents were asked to indicate the extent to which they agreed or disagreed with each statement as it applies to their business’s principal industry (that is, the industry that accounts for the largest percentage of your businesses sales).

**Analytical Techniques**

Instruments were subjected to principal component factor analysis, with results obtained discussed in the next section in terms of factor loadings and reliability. Descriptive statistics were then calculated in terms of mean scores and deviations in scores. The hypotheses were tested using correlational analysis, with the Pearson Correlation Coefficients reported in terms of their significance.
**Results**

In terms of sample distribution by industry sector, refer to table 1. Certain industries were clearly under-sampled and others over-sampled. Nonetheless, based on the heterogeneity of the several different industry sectors sampled, the generalizability of this study is strengthened. For firm demographics, see table 2 representing sampled firms which are generally mature in age, with relatively high employee numbers.

**Reliability and Factor Analysis**

To test the scales for internal consistency, items measuring EO and TO render an overall satisfactory Cronbach’s Alpha of 0.793 and 0.749 respectively. In terms of the environmental scales, the two distinct sub-scales of environmental hostility and dynamism produced satisfactory Cronbach’s Alpha’s of 0.742 and 0.717 respectively.

To test for scale validity, employing factor analysis using the Bartlett’s test of sphericity, a significant (0.000) Chi-Square of 638.228 at 36 degrees of freedom (df) score was produced. This test calculates the determinate of the matrix of the sums of products and cross products from the inter-correlation matrix. The Kaiser Meyer Olkin (KMO) measure of sampling adequacy produced a result of 0.823 (KMO values of 0.90 to 1.00 indicate a high degree of common variance). Factor loadings greater or equal to .30 were regarded as significant, and factors with eigenvalues greater than 1 (based on scree tests and Kaisers stopping rule) (Cooper and Emory 1995), were used to decide on optimal number of factors to retain. The items used to measure the EO dimensions were factored using the principal axis factoring method resulting in one factor (eigenvalue $\lambda = 4.564$), with a communality factor of 57 percent. Refer to table 3 for factor loadings and the Cronbach Alpha’s.
For the environmental hostility and dynamism sub-scales, by way of principal axis factoring, communalities were calculated and using Varimax rotation – converging in 7 iterations – two factors with eigenvalues of 4.679 and 1.254 respectively, indicated suitable factor loadings. These two factors reflect the distinct sub-scales of environmental hostility and dynamism. Refer to table 6, where factor loadings and Cronbach Alpha’s are displayed.

**Descriptives**

By applying tests for normality, and by calculating the Kolmogorov-Smirnov and Shapiro-Wilk statistics, test scores (0.07) indicated that normality was not violated.

Descriptive analysis revealed that for the EO scale, above mid-point (3.5) scores across items were prevalent. A relatively high average score emerges for this scale, suggesting that firms have medium to high levels of EO, as captured through the dimension of innovativeness, proactiveness and risk-taking. In a few instances the variance, as measured by the standard deviation, is relatively high, where for the first variable the score exceeds a value of two. This indicates that there is a lot of variation among firms with regard to some of the EO items. See table 4 and 5 for the results.

For descriptives on the environmental scales, both dynamism and hostility have above mid-point (3.5) scores, although many only just exceed this mid-point score. This means that firms perceive environmental hostility and dynamism to be slightly above average. See table 6. However managers’ perceptions of their environments do not always reflect the objective qualities of their markets and industries. Such mismatch may arise from ineffective competitive analyses, poor environmental analyses, cognitive biases, or managerial hubris (Zahra and Bogner 1999).
Firm Clustering

Consistent with previous studies cluster analysis was used to empirically delineate between firms with different types of TO (Galbraith, Rodriguez, and DeNoble 2008). The process of clustering the data set was performed with the use of clustering algorithms that identified similar characteristics in the data set, then filtered/partitioned into the three clusters. Examining the difference in categorical values of the TO variables ($p < 01$), the first cluster clearly reflected a grouping of firms with TO orientation, that is, “first mover” (21.74 percent of the sample), the second cluster appeared more of an “innovator” TO (9.57 percent of the sample), and the third cluster, the majority of responses, termed as “practioner” TO (68.69 percent of the sample).

Multivariate Analyses

To evaluate the hypothesized relationships between the variables, correlational analysis was employed. It has been suggested that the correlation significance should be checked before embarking on regressions (Cooper and Emory 1995). For the correlation matrix, refer to table 7, here the Pearson Correlation Coefficients are reported with the values in the second line of each row indicating the p values. According to Cohen and Holliday (1998), a multiple correlation coefficient of 0.7 or above is considered a high relationship. Anastasia and Urbani (1997) maintain it should be high enough to be statistically significant at the 0.05 and 0.01 levels.

Based on table 7, hypothesis 1 cannot be confirmed, as EO and TO are not significantly correlated. However both EO and TO are highly correlated with environmental hostility and dynamism. In fact EO has almost a perfect correlation with both environmental measures. This suggests that a variance in EO is highly attributable to a change in either environmental dynamism or hostility.
To further explore associations with any of the control variables, firm age were juxtaposed against EO, TO and a combined environmental dynamism or hostility score. All variables dipped in the 7-10 year category (not shown). A plausible explanation for this is that firms mimic the classical venture life cycle. When firms enter into a late growth phase and into the mature phase a period of consolidation occurs where TO and/or EO and environmental factors drop off. When firms move into the rejuvenation phase (post 10 years), an increase in TO and/or EO and environmental factors is evident during this phase.

Discussion

This purpose of this study was to test the relationship between EO and TO by measuring how environmental factors might be associated with each orientation type. Contributing to literature by building on, and complementing existing studies, this study emphasised the challenge and opportunity for firms in emerging economies to adopt technology and act entrepreneurially, which can optimize and maximize developmental efforts.

In line with contemporary research, it was expected that the entrepreneurial and technology orientations of firms will be significantly associated with each other as well as with perceived environmental dynamism and hostility. Contrary to expectations, no evidence for hypothesis 1 could be detected. Nonetheless the lack of significant associations between EO and TO is not trivial for exploratory research in a new domain such as entrepreneurship, particularly in an emerging country context. On the other hand, the significant and positive correlations between EO and environmental hostility and dynamism provide unequivocal support for hypothesis 2. The association between TO and hostility and dynamism is less strong, yet significant at the 0.05 level. These findings resonate with research which has
found that a key part of a technology and innovation strategies is the interaction of that strategy with the ventures external environment (Zahra and Bogner 1999).

Another plausible explanation for the strong and positive associations is when the environment is characterized by complexity and dynamism, firms have to anticipate future scenarios and develop proactive EO and TO strategies in ambiguous and unstructured surroundings (Allen and Stearns 2004).

This study also re-establishes scale reliability and validity in an emerging country context. Concerns have been expressed as to whether imported instruments would stand up to validation across countries (Nkosi and Roodt 2004; Van de Vijver and Rothmann 2004). This study has found support for the same factor structures across the measures used.

Research on firm innovation, in the African context may be considered as valuable, as very few empirical studies which have been previously conducted focus on innovation and technology in an emerging country context. The majority of research on firm innovation has been conducted in the United States and subsequently the generalizability of TO and in particular EO remains limited because of a western proclivity with limited cross-cultural testing (Antoncic and Hisrich 2001). Although studies (for instance, Kreiser et al. 2002) have confirmed the cross-cultural validity of the EO scale, samples typically exclude African countries. Therefore an empirical study of this nature is potentially valuable considering that technology and innovation and its effective diffusion are central and critical to the growth of economic output, productivity and employment. Additionally the importance of international entrepreneurship justifies that constructs are tested for relevance in emerging country contexts as well (Jantunen, Puumalainen et al. 2005; Ulijn, Nagel, and Liang 2001).

The centrality of the TO and EO constructs is not new, nevertheless this study adds to a better understanding of these strategic orientations in a non-western context, which in turn enhances their generalizability. The study also offers some solutions towards understanding
how TO and EO may promote firm innovation which encourages the diffusion, adoption and application of the very latest technologies. This is particularly relevant where a lot of potential exists in developing countries to “import and adapt” technologies developed in industrialized countries (von Broembsen et al. 2005).

A deep and thorough understanding of EO, TO and environmental conditions is important not only for academic purposes but also because the subject has salience for practitioners and policy makers. These implications relate to the profitability and competitiveness of the firm as well as to the overall economic performance of industry and the national economy (Dorf and Byers 2008). Businesses which incorporate innovation into their vision by relying on entrepreneurial strategies and actions, understand that innovation is at the core of an entrepreneurial organization. It is around this core that other elements of the organization such as strategy, management style and structure are built. Corporate environments supportive of entrepreneurship must provide appropriate reward systems, top management support, explicit goals and appropriate organizational values which signal to employees that entrepreneurial behaviour action is desirable.

Moreover, government programs and incentives could focus on established firms, with higher levels of EO and TO rather than on potential individual entrepreneurs, since in an emerging country context institutional conditions need to be strengthened first, before entrepreneurship flourishes (Minniti et al. 2005). Around the world most governments have recognized the potential in high technology and have begun nurturing this industry through support institutions. They acknowledge the importance of intellectual capital in growing knowledge economies and create conditions that foster innovation.
Limitations and Future Research

Because environmental conditions vary significantly from one industry to another (Dess and Beard 1984), and because the nature of the environmental characteristics is inextricably linked to the stage of the industry’s evolution (Zahra and Bogner 1999), controls for these variations are necessary in future studies. Moreover, in some contexts there may be differences how the environmental dimensions relate to EO and TO. Findings in this study may also be related to the influence of other contingencies not incorporated or to measurement issues unobserved. A further limitation of this article is that a cross-sectional study loses the dynamic aspects of EO and TO, particularly in hostile and dynamic environments, which prevents conclusions about causal relationships to be drawn.

Conclusion

Entrepreneurship can provide direction to the company’s entire operation, serves as an integral component of a firm’s strategy, and may function as the core component of corporate strategy (Covin and Slevin 1997). Each of the EO dimensions – innovativeness, proactiveness and risk-taking - is useful for predicting the success of business which may be contingent on the environment. Managers can establish the impact of environmental dynamism and hostility on EO and TO and explore the effect of these factors on various performance indicators. Indeed mangers need to adopt a contingency perspective on how environmental and organizational factors moderate, mediate or interact with TO and EO to enhance firm performance.
References


## Table 1
Sample Distribution by Class of Industry Sectors

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>N</th>
<th>Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Personal Care Products</td>
<td>27</td>
<td>11.7</td>
<td>11.7</td>
</tr>
<tr>
<td>Computers / Office Machinery Electronics</td>
<td>24</td>
<td>10.4</td>
<td>22.2</td>
</tr>
<tr>
<td>Food Products</td>
<td>23</td>
<td>10.0</td>
<td>32.2</td>
</tr>
<tr>
<td>Leisure Goods</td>
<td>16</td>
<td>7.0</td>
<td>39.1</td>
</tr>
<tr>
<td>Industrial, Commercial Machinery</td>
<td>16</td>
<td>7.0</td>
<td>46.1</td>
</tr>
<tr>
<td>Leather / Rubber / Plastics Materials</td>
<td>15</td>
<td>6.5</td>
<td>52.6</td>
</tr>
<tr>
<td>Others (Music Entertainment / Aerospace)</td>
<td>13</td>
<td>5.7</td>
<td>58.3</td>
</tr>
<tr>
<td>Metal Products: non-ferrous</td>
<td>13</td>
<td>5.7</td>
<td>63.9</td>
</tr>
<tr>
<td>Beverages &amp; Tobacco</td>
<td>13</td>
<td>5.7</td>
<td>69.6</td>
</tr>
<tr>
<td>Banking Industry / Services</td>
<td>12</td>
<td>5.2</td>
<td>74.8</td>
</tr>
<tr>
<td>Forestry Products &amp; Paper Furniture</td>
<td>11</td>
<td>4.8</td>
<td>79.6</td>
</tr>
<tr>
<td>Insurance</td>
<td>8</td>
<td>3.5</td>
<td>83.0</td>
</tr>
<tr>
<td>Instruments &amp; Control Devices, Medical</td>
<td>7</td>
<td>3.0</td>
<td>86.1</td>
</tr>
<tr>
<td>Metal Products: Ferrous</td>
<td>6</td>
<td>2.6</td>
<td>88.7</td>
</tr>
<tr>
<td>Textiles &amp; Apparel</td>
<td>5</td>
<td>2.2</td>
<td>90.9</td>
</tr>
<tr>
<td>Specialty Chemicals</td>
<td>5</td>
<td>2.2</td>
<td>93.0</td>
</tr>
<tr>
<td>Recruitment</td>
<td>5</td>
<td>2.2</td>
<td>95.2</td>
</tr>
<tr>
<td>Printing &amp; Publishing</td>
<td>4</td>
<td>1.7</td>
<td>97.0</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>4</td>
<td>1.7</td>
<td>98.7</td>
</tr>
<tr>
<td>Automobiles</td>
<td>3</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

## Table 2
Sample Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+ 20 years</td>
<td>111</td>
<td>48.3</td>
</tr>
<tr>
<td>10-19 years</td>
<td>52</td>
<td>22.6</td>
</tr>
<tr>
<td>7-10 years</td>
<td>35</td>
<td>15.2</td>
</tr>
<tr>
<td>3-7 years</td>
<td>29</td>
<td>12.6</td>
</tr>
<tr>
<td>&lt;3 years</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Firm Size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+ 99 employees</td>
<td>131</td>
<td>56.5</td>
</tr>
<tr>
<td>50-99</td>
<td>44</td>
<td>19.0</td>
</tr>
<tr>
<td>21-49</td>
<td>33</td>
<td>14.2</td>
</tr>
<tr>
<td>11-20</td>
<td>15</td>
<td>6.50</td>
</tr>
<tr>
<td>&lt;10</td>
<td>7</td>
<td>3.00</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 3
Factor Matrix for EO scale: Reliability and Validity

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>Cronbach’s Alpha</th>
<th>Item Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, the top managers of my company favour a strong emphasis on marketing or R&amp;D</td>
<td>0.782</td>
<td>0.883</td>
<td>0.390</td>
</tr>
<tr>
<td>In dealing with its competitors, my company typically responds to actions or initiates actions</td>
<td>0.764</td>
<td>0.883</td>
<td>0.655</td>
</tr>
<tr>
<td>How many lines of new products has your company marketed in the past three years</td>
<td>0.741</td>
<td>0.876</td>
<td>0.757</td>
</tr>
<tr>
<td>Changes in product or service lines have been minor or quite dramatic</td>
<td>0.736</td>
<td>0.874</td>
<td>0.361</td>
</tr>
<tr>
<td>In general, the top managers of my company have a proclivity to low risk or high risk projects</td>
<td>0.727</td>
<td>0.881</td>
<td>0.403</td>
</tr>
<tr>
<td>In dealing with its competitors, my company is seldom the first or often the first</td>
<td>0.698</td>
<td>0.875</td>
<td>0.543</td>
</tr>
<tr>
<td>In dealing with its competitors, my company avoids competition or is highly competitive</td>
<td>0.688</td>
<td>0.888</td>
<td>0.600</td>
</tr>
<tr>
<td>In general, the top managers of my company favour incremental behaviour or bold action</td>
<td>0.669</td>
<td>0.873</td>
<td>0.587</td>
</tr>
<tr>
<td>When confronted with decision making involving uncertainty we wait and see or are bold</td>
<td>0.647</td>
<td>0.872</td>
<td>0.661</td>
</tr>
</tbody>
</table>

Notes: Item wording has been abbreviated. Extraction and Rotation Method: Principal Axis Factoring. One factor extracted. Varimax with Kaiser Rotation Normalization. Rotation converged in 4 iterations.

Table 4
Descriptive Statistics of Entrepreneurial Orientation

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, the top managers of my company favour a strong emphasis on marketing or R&amp;D</td>
<td>229</td>
<td>3.698</td>
<td>2.004</td>
<td>0.095</td>
</tr>
<tr>
<td>In dealing with its competitors, my company typically responds to actions or initiates actions</td>
<td>229</td>
<td>4.512</td>
<td>1.802</td>
<td>0.102</td>
</tr>
<tr>
<td>How many lines of new products has your company marketed in the past three years</td>
<td>229</td>
<td>3.803</td>
<td>1.783</td>
<td>0.099</td>
</tr>
<tr>
<td>Changes in product or service lines have been minor or quite dramatic</td>
<td>229</td>
<td>4.524</td>
<td>1.465</td>
<td>0.104</td>
</tr>
<tr>
<td>In general, the top managers of my company have a proclivity to low risk or high risk projects</td>
<td>229</td>
<td>4.725</td>
<td>1.511</td>
<td>0.109</td>
</tr>
<tr>
<td>In dealing with its competitors, my company is seldom the first or often the first</td>
<td>229</td>
<td>4.787</td>
<td>1.602</td>
<td>0.098</td>
</tr>
<tr>
<td>In dealing with its competitors, my company avoids competition or is highly competitive</td>
<td>229</td>
<td>4.821</td>
<td>1.676</td>
<td>0.116</td>
</tr>
<tr>
<td>In general, the top managers of my company favour incremental behaviour or bold action</td>
<td>229</td>
<td>4.299</td>
<td>1.523</td>
<td>0.117</td>
</tr>
<tr>
<td>When confronted with decision making involving uncertainty we wait and see or are bold</td>
<td>229</td>
<td>4.222</td>
<td>1.461</td>
<td>0.130</td>
</tr>
</tbody>
</table>

Note: Item wording has been abbreviated.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
<th>Cronbach’s Alpha</th>
<th>Item Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental hostility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The failure rate of firms in my industry is high.</td>
<td>0.754</td>
<td>0.623</td>
<td>0.210</td>
</tr>
<tr>
<td>My industry is very risky; one bad decision could easily threaten the viability of my business.</td>
<td>0.612</td>
<td>0.650</td>
<td>0.619</td>
</tr>
<tr>
<td>Competitive intensity is high in my industry.</td>
<td>0.726</td>
<td>0.656</td>
<td>0.638</td>
</tr>
<tr>
<td>Customer loyalty is low in my industry.</td>
<td>0.339</td>
<td>0.687</td>
<td>0.722</td>
</tr>
<tr>
<td>Severe price wars are characteristic of my industry.</td>
<td>0.658</td>
<td>0.727</td>
<td>0.646</td>
</tr>
<tr>
<td>Low profit margins are characteristic of my industry.</td>
<td>0.530</td>
<td>0.627</td>
<td>0.545</td>
</tr>
<tr>
<td><strong>Environmental dynamism</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actions of competitors are easy to predict.</td>
<td>0.708</td>
<td>0.714</td>
<td>0.534</td>
</tr>
<tr>
<td>The set of competitors is in my industry has remained relatively constant over the past 3 years.</td>
<td>0.730</td>
<td>0.715</td>
<td>0.423</td>
</tr>
<tr>
<td>Product demand is easy to forecast.</td>
<td>0.678</td>
<td>0.646</td>
<td>0.712</td>
</tr>
<tr>
<td>Customer requirements are easy to forecast.</td>
<td>0.566</td>
<td>0.697</td>
<td>0.757</td>
</tr>
<tr>
<td>My industry is very stable with every little change resulting from major economic, technological..</td>
<td>0.514</td>
<td>0.744</td>
<td>0.508</td>
</tr>
</tbody>
</table>

Notes: Item wording has been abbreviated. Extraction and Rotation Method: Principal Axis Factoring. Two factors extracted. Varimax with Kaiser Rotation Normalization. Rotation converged in 7 iterations.
Table 6
Descriptives for Environmental Hostility and Dynamism

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental hostility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The failure rate of firms in my industry is high.</td>
<td>229</td>
<td>3.594</td>
<td>1.174</td>
<td>0.114</td>
</tr>
<tr>
<td>My industry is very risky, one bad decision could …</td>
<td>229</td>
<td>3.755</td>
<td>1.664</td>
<td>0.111</td>
</tr>
<tr>
<td>Competitive intensity is high in my industry.</td>
<td>229</td>
<td>3.365</td>
<td>1.663</td>
<td>0.121</td>
</tr>
<tr>
<td>Customer loyalty is low in my industry.</td>
<td>229</td>
<td>4.584</td>
<td>1.855</td>
<td>0.120</td>
</tr>
<tr>
<td>Severe price wars are characteristic of my industry.</td>
<td>229</td>
<td>3.676</td>
<td>1.736</td>
<td>0.128</td>
</tr>
<tr>
<td>Low profit margins are characteristic of my industry.</td>
<td>229</td>
<td>4.365</td>
<td>1.903</td>
<td>0.115</td>
</tr>
<tr>
<td><strong>Environmental dynamism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actions of competitors are easy to predict.</td>
<td>229</td>
<td>3.694</td>
<td>1.675</td>
<td>0.102</td>
</tr>
<tr>
<td>The set of competitors is relatively constant.</td>
<td>229</td>
<td>3.784</td>
<td>1.746</td>
<td>0.127</td>
</tr>
<tr>
<td>Product demand is easy to forecast.</td>
<td>229</td>
<td>3.589</td>
<td>1.737</td>
<td>0.110</td>
</tr>
<tr>
<td>Customer requirements are easy to forecast.</td>
<td>229</td>
<td>3.551</td>
<td>1.825</td>
<td>0.109</td>
</tr>
<tr>
<td>My industry is very stable with every little change ….</td>
<td>229</td>
<td>3.672</td>
<td>1.827</td>
<td>0.119</td>
</tr>
</tbody>
</table>

Notes: Item wording has been abbreviated.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Entrepreneurial Orientation (EO)</th>
<th>Technology Orientation (TO)</th>
<th>Environmental Dynamism (ED)</th>
<th>Environmental Hostility (EH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO</td>
<td>Pearsons Correlation 1.000</td>
<td>0.483 1.000</td>
<td>0.954 0.723 1.000</td>
<td>0.964 0.696 0.999 1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) 0.034**</td>
<td>0.002* 0.001*</td>
<td>0.037** 0.044** 0.078</td>
<td>0.025** 0.032** 0.012** 0.002*</td>
</tr>
<tr>
<td></td>
<td>N 229</td>
<td>229 229 229</td>
<td>229 229 229</td>
<td>229 229 229</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed).
ABSTRACT

This short exploratory paper aims to study job attitudes of business college students with a view of contributing to the explanation of the reported global growth in young entrepreneur activities. The five employment attitude factors of security, workload, social environment, responsibility, and opportunity, adapted from the theory of planned behavior are used to conduct a comparative study of work attitudes of university business students in the United States of America and South Africa to establish if there are significant differences across nations. The results show similarity in what the students expect from their future careers but do not necessarily provide an explanation for the observed global phenomenon of increased activity in youth entrepreneurship.

PRINCIPAL RESEARCH TOPIC AND RESEARCH QUESTION

In the past few years successive Results Reports from the Global Entrepreneurship Monitor indicate that throughout the world entrepreneurs are pursuing new ventures out of both necessity and opportunity. This paper aims to study job attitudes of business graduates with a view of contributing to the explanation of the reported global growth in young entrepreneur activities. Starting up a new venture is acknowledged to be an individual decision, (Littunen, 2000). This makes the individual entrepreneur central in the investigation of entrepreneurial activities. Search has encouraged a continuous study and refinement of the entrepreneurial profile. Interest in entrepreneurship among young people is reported to be growing (Scarborough, et. al, 2009), prompting increased research interest in the area, (Harris, et. al., 2008). In examining the global landscape, it is clear that some cultures produce many more entrepreneurs than others, (Gartner, 1990) and finding possible explanations continues to be of increasing importance in the global economy.
Although significant research has been conducted in the field of entrepreneurship studies on entrepreneurial motivation are still limited, (Kuratko, et. al., 1997). Research on work values of young college graduates has shown that they desire work which provides a feeling of accomplishment, job security and the opportunity for advancement. Much of this research has been done in developed and individual country economies. Also with the reported increase in entrepreneurial activity among young people a further research question that arises is whether the work values reported earlier still hold and whether there are differences across countries.

The objective of this exploratory comparative study is to contribute to entrepreneurship research through establishing the work attitudes of today’s undergraduate college business students across countries. The five employment attitude factors of security, workload, social environment, responsibility, and opportunity, adapted from the theory of panned behavior are used to conduct a comparative study of work attitudes of university business students in the United States of America (US) and South Africa (SA) to establish if there are significant differences across nations.

**LITERATURE REVIEW**

In one of the many suggestions of defining entrepreneurship Gartner (1989), views entrepreneurship as a process of organization creation. Scholars have attempted to explain new business formation from a range of perspectives including psychology (Bird, 1992), sociology (Aldrich, 1990), and economics (Douglas and Shepherd, 2000). Career choices have been demonstrated to be cognitive in nature, (Kruger, et. al 2000), evolving as we cognitively process our knowledge, beliefs, and experiences. There are studies that suggest that new ventures emerge
because of deliberate choices made by individuals (Shaver and Scott, 1991), and one of the immediate antecedents of behavior is intention, (Ajzen, 1991, Kim and Hunter, 1993).

Entrepreneurship research has attempted to identify the situational factors and environmental factors that predict entrepreneurial activity. Using the contingency theory Gilad and Levine (1986), proposed the “push” and “pull” theories as possible explanations of entrepreneurial motivation. The “push” theory suggests that a person can opt for entrepreneurship as a result of unfavorable environmental conditions like job dissatisfaction, while the “pull” theory argues that people can find entrepreneurship attractive. Despite research indications that individuals become entrepreneurs mainly because of “pull” factors college graduates and students are reported to be increasingly disenchanted with career prospects as organizational employees, (Orhan and Scott, 2001).

**METHODODOLOGY**

This study draws on the demonstration by Kolvereid (1996) that the Ajzen (1991) framework is a solid model for predicting entrepreneurial intentions to examine the work attitudes of undergraduate business college students in the US and South Africa. One of the variables that influence intent to perform a behavior is attitude towards the behavior. Our basic proposition is that a partial explanation for the increase in entrepreneurial activity among young people is that compared to organizational employment, entrepreneurship better meets the career aspirations of the young people of today and that this phenomenon cuts across nations.

We conduct a survey of work attitudes of undergraduate university business students in partner universities in South Africa and the US. The sample consists of undergraduate student
subjects facing imminent career decisions. Data is collected through a self administered questionnaire. The research instrument questions are adapted from prior research designed to establish what the subjects consider important in choosing a career. A basic survey analysis tool is used to generate the career preferences.

RESULTS

The questions allowed assessment of job attitudes along identifiable categories. Top on the list of preferred career attributes for the South African students was an interesting and motivating job, (87.9 per cent), with promotional opportunities (87.9 per cent). These fall into two categories, the nature of the job, and potential rewards from the job. In second place was the challenge and excitement associated with the job (84.75 per cent). This attribute, as with interest and motivation, is about the nature of the job. A close third position at 81.8 per cent, was economic opportunity. Fourth was opportunity for career progress (78.8 per cent), and participating in the whole process (78 per cent), and the last in the top five was job security and stability both at 72.7 per cent., which is more than ten percentage points lower than the first position scores for job characteristics and rewards.

Analysis of the response from US students showed a very clear preference for opportunities in the career. In first place was opportunity for career progress (81.4 per cent), and second was promotion opportunities (78.9 per cent). In third place are two factors in different categories. The students are interested in a job that is interesting and motivational (71.8 per cent), a job characteristic factor, and job security (71.8 per cent). In fourth position, at 69 per cent is the importance of economic opportunity. Last in the top five preferences for the US students was job challenge and excitement (67.1 per cent).
Table one
Preferred career attributes

<table>
<thead>
<tr>
<th>Rank</th>
<th>South Africa</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Promotion, Interesting and motivating job</td>
<td>Opportunity for career progress</td>
</tr>
<tr>
<td>2.</td>
<td>Challenge and excitement</td>
<td>Promotion</td>
</tr>
<tr>
<td>3.</td>
<td>Economic opportunity</td>
<td>Interesting and motivating job, Job security</td>
</tr>
<tr>
<td>4.</td>
<td>Opportunity for career progress, Process participation</td>
<td>Economic opportunity</td>
</tr>
<tr>
<td>5.</td>
<td>Job security, Job stability</td>
<td>Challenge and excitement</td>
</tr>
</tbody>
</table>

Except for job stability and process participation the two groups of students share largely similar expectations of their careers. A cursory view of these preferences does not necessarily highlight entrepreneurial orientation.

The next set of variables considered important by the students with relatively equal ranking by the students includes the need to realizing one's own dreams, creating something new, exploiting creative ability, to have authority and decision making power. The results appear to suggest that although today's students have a first preference for what organizational employment may offer, disappointment with organizational employment may lead them to enterprise. A possible explanation for the observed increase in young people taking on entrepreneurship is that this route is seen as the alternative strategy to realizing one's dreams.

Table two
Attitudes towards responsibility

<table>
<thead>
<tr>
<th>Responsibility statement</th>
<th>South Africa Strongly disagree</th>
<th>United States Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid responsibility</td>
<td>84.8 per cent</td>
<td>70.4 per cent</td>
</tr>
<tr>
<td>Limit responsibility</td>
<td>65.6 per cent</td>
<td>67.6 per cent</td>
</tr>
<tr>
<td>Avoid commitment</td>
<td>59.4 per cent</td>
<td>69.0 per cent</td>
</tr>
</tbody>
</table>
In responding to the question of responsibility and commitment the students surveyed strongly disagreed that the need to avoid responsibility, limit responsibility, or avoid commitment would influence their choice of a job. A comparative analysis of the findings shows a more consistent attitude towards responsibility and commitment among the US students surveyed, whereas the message from the South African students appears to suggest a greater willingness to take on responsibility that willingness to commit oneself.

**DISCUSSION**

Four overall global patterns emerge from the analysis. First, of highest importance to the college students is a career that is interesting, motivational, challenging, and one that recognizes achievement and allows participation. Prior research on work values of young college graduates has shown that they desire work which provides a feeling of accomplishment, job security and the opportunity for advancement. Results of this exploratory research appear to suggest a lower rating for job security and a higher rating for job excitement. Second, the results appear to challenge the popularly held generalizations that bill today’s young adults as people who avoid. Third, job security and stability, while perceived to be important, cannot come at the expense of personal fulfillment and career challenges. Increased entrepreneurial activity among today's young people may not necessarily be a result of an increased preference for entrepreneurship.

A possible explanation for the slight differences found in the ranking of the five job related attitudes, may be Abbey's (2002) finding that cultural differences, particularly between individualistic and collectivist cultures, can influence motivational preferences of individuals. However this study did not specifically investigate this relationship. It is interesting to note that in its report on entrepreneurship during the recession the 2009 attitudes Results Report from the
Global Entrepreneurship Monitor indicate a positive trend in perceived entrepreneurial opportunities for South Africa, and a negative trend for the US.

**CONTRIBUTIONS**

This research makes two important contributions. First, it brings out what young business students expect from their careers. Second, it provides a comparative perspective of the career preferences of young people. The important role of entrepreneurship to any economy is widely acknowledged. Economic and community development hinges on growing business formation and growth. To encourage economic development in the form of new businesses it is necessary to have information on factors that exert a positive influence on attitudes towards self employment. Information that helps enhance entrepreneurship should be of interest to a range of stakeholders including researchers, educators and policy makers. Understanding differences in work attitudes across nations will make a contribution towards explaining differences in rates of firm startups across nations an important consideration in this age of globalization.

**LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

One limitation of this exploratory study is its cross sectional nature. It does not provide a direct link between job attitude and active business founding. As such conclusions linking job attitudes to levels of entrepreneurship are theoretically based. Another limitation is that because of the survey nature of the research it has not been possible to make follow up questions to uncover the reasoning behind the attitudes.
The results suggest potentially interesting explanatory research to provide detailed information of the career intentions of today’s business students. It is also important to provide longitudinal studies in this area to follow the career paths of the respondents.

REFERENCES


The Traits and Growth Orientation of a Successful Forest Machine Entrepreneur*

by Juho Soirinsuo and Pekka Mäkinen

Abstract

The purpose of this study was to investigate the entrepreneurial traits of a successful growth-oriented forest machine entrepreneur in Finland. The study attempts to determine what the key traits of successful forest machine entrepreneurs are. The research material was collected in 2008 by personal interviews with 23 entrepreneurs. The entrepreneurial traits included innovativeness, willingness to take risks, proactivity, locus of control and achievement motivation. The reasons for choosing to grow and the goals of growth were also examined as well as growth method. The study found that self-perceived innovativeness, proactivity and achievement motivation correlated positively with successful growth. Goal setting and the entrepreneurial traits had a strong correlation with the chosen growth strategy and the success of growth. The findings show that the listed traits play an important role in successful growth and they can anticipate behaviour in growth.

Keywords: Entrepreneurial traits, Finland, forest machine entrepreneurs, goal setting, growth strategy.

Introduction

Forest transport (i.e., forwarding) began to mechanize in the 1960s, and at that time the first forest machine entrepreneurs also appeared. In the 1980s felling was done mainly by lumberjacks, but later in the decade harvesters began to become more general. In 1985 approximately 200 harvesters were in use, whereas ten years later the number was six times greater (Mäkinen, 2008).

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Nowadays nearly all logging is done mechanically using harvesters and forwarders, and over 5200 forest machines operate in Finland, mostly owned by close to 2600 forest machine entrepreneurs (MetsäTrans, 2008).

Finland’s forests are very important for the national economy and are even more crucial for employment in the rural areas. The volume of roundwood and forest residual energy wood harvested by forest machine entrepreneurs in Finland in 2007 was 57.7 million cubic meters – an increase of 8 percent since 2001 (Finnish Statistical... 2008). A recent trend in the forest machine sector has been an increasing number of entrepreneurs, and large companies are also becoming more common. Even though the sector is driven by small companies and 88 percent of the entrepreneurs own less than four forest machines (turnover less-than 300.000) (MetsäTrans, 2008), some of the larger entrepreneurs have a very strong growth strategy (Soirinsuo & Mäkinen, 2009). It should also be remembered that forest machine entrepreneurs are the largest employers in the Finnish forest sector (excluding processing).

Entrepreneurship research has been aimed at the processes of setting up new enterprises. Too often the existing firms and the potential they hold are forgotten. Growth is a very important field of study because much of the growth of industry comes from the growth of existing establishments, rather than from new ones (Kumar et al., 2001; Mäkinen et al., 2002). Surprisingly few studies, however, have investigated the crucial relationship between growth and profitability (Davidsson et al., 2005). Penttinen et al. (2009) stated that among forest machine companies in Finland "effective aids and tools for improving the economic and managerial skills of entrepreneurs are needed". This study attempts to fulfill that need.
Higher growth in the forest machine sector in Finland has resulted partly from the large timber procurement companies outsourcing more of their activities to so-called key or area entrepreneurs, who have taken on increasingly larger areas of the business in Finland. There is very little research on the growth of forest machine companies. However, many studies have been done on forest machine entrepreneurs, entrepreneurship in general, and the growth and profitability of small companies.

The aim of the present study was to investigate the largest growth-oriented forest machine entrepreneurs and the individual behind the growth. It should be noted that growth itself is a very important strategic decision, the success of which can be seen in financial results. The study emphasizes the importance of the entrepreneur and the chosen growth strategy. The purpose was to clarify the reasons why entrepreneurs decide to grow, what the traits of a successful entrepreneur are and, most importantly, what makes certain entrepreneurs' growth more successful. The traits are analysed with multiple variables that affect profitability and growth success. The study aims to link growth, profitability and entrepreneurial traits together in order to find successful growth methods. It is essential to study companies’ internal factors when experiencing growth, because it would be an unwise oversimplification to assume that nothing else but size changes (Davidsson et al., 2005). There is also compelling evidence that an owner-manager’s growth motivation, vision and goals have direct effects on a firm’s growth (Mok & van den Tillaart, 1990; Kolvereid & Bullvåg, 1996; Baum, Locke & Kirkpatrick, 1998; Wiklund, 2001; Davidsson et al., 2005).
**Materials and methods**

**Research material**

The study focuses on the largest limited companies in the forest machine sector which have had a growth in turnover from 2001 to 2007. The growth of a company can be measured in many ways, but it is generally agreed that growth in sales is the one most universally applicable (Davidsson et al., 2005). The sample included the largest limited forest machine companies in Finland because these often have more easily accessible material and because small one-machine companies are not necessarily even interested in growth. In this way, the sample included a significant number of the largest growth-oriented companies in the sector.

The sample consisted of 32 entrepreneurs of which 23 agreed to being interviewed. This meant a response of 72 per cent. The entrepreneurs were interviewed individually in autumn 2008. Questions concerning self-perceptions of innovativeness, willingness to take risks, proactivity and achievement motivation were answered on a scale of 1-5. Locus of control was either internal or external. The questions about goals, reasons for choosing growth and growth strategy were open, as this would reveal the traits better. Davidsson (1989) argued that to the extent that the owner-manager has a choice, going for growth is more entrepreneurial than not doing so when both alternatives are feasible, just as starting a firm is considered more entrepreneurial than not starting one. This study strongly links entrepreneurship, profitability and growth together.

The companies’ financial statements from the years 2001 to 2007 were also taken into account to determine the financial success of their growth. The average fiscal period ended in August and nine companies had used the calendar year as a fiscal period. Two of the entrepreneurs, however, were not able to supply financial statements for one or two years (Table 1).
Table 1. Twenty-three available financial statements from selected companies.

<table>
<thead>
<tr>
<th>Yearly data (n)</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly data (%)</td>
<td>95.7</td>
<td>95.7</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>95.7</td>
</tr>
</tbody>
</table>

Groups were formed based on their success ratio. This ratio was measured by adding the profitability score and the equity ratio score. The profitability score was calculated with formula (1) which counts the weighted average of profitability (net profit), in order to clarify which companies grew most successfully during the period studied. The formula overrates the profitability at the end of the period and underrates the profitability at the beginning as follows:

\[
S_p = 4 \left[ \left( \sum_{t=1}^{7} (p_t \times 0.7) + \sum_{t=1}^{7} (p_t \times 0.85) + \sum_{t=1}^{7} (p_t \times 1.15) + \sum_{t=1}^{7} (p_t \times 1.3) \right) \times 100 \right], \tag{1}
\]

where \( S_p \) is the profit score, which is the weighted average of net profit percentage \( p \) during the time period \( t \), measured from years \( t_{1...7} \). The equity ratio score was counted with the similar formula (2) overweighing equity ratio at the end of the period and underrating equity ratio at the beginning of the period as follows:

\[
S_e = 0.5 \left[ \left( \sum_{t=1}^{7} (e_t \times 0.7) + \sum_{t=1}^{7} (e_t \times 0.85) + \sum_{t=1}^{7} (e_t \times 1.15) + \sum_{t=1}^{7} (e_t \times 1.3) \right) \times 100 \right], \tag{2}
\]

where the equity ratio score \( S_e \) is the weighted average of equity ratio \( e \). Weighted profitability was multiplied by four and weighted equity ratio was divided by two so that their weights would be equal. The three groups were formed on the basis of the companies' financial success (net profit and equity ratio) from 2001–2007, as we already knew that every company grew during that time. This
method was used to minimize the effect of stochastic variation. Further, the use of only first year and end year data for growth calculations has been criticized because it models growth as one giant leap (Davidsson & Wiklund, 2000).

The three groups formed were defined as highly successful, those with high and/or increasing profitability and equity ratio during the growth period; less successful, those with weak and/or decreasing profitability and equity ratio; and moderately successful, those in between, with high or increasing equity ratio or net profit ratio.

**Literature review**

Despite the fact that historically the forest machine sector has suffered from low profitability (Mäkinen, 1988, 1993; Soirinsuo & Mäkinen, 2009; Yritystutkimuksen... 2009) growth is not necessarily the key to better profitability. In a study by Soirinsuo & Mäkinen (2009) based on companies' financial statements, it was found that among large growth-oriented forest machine enterprises profitability varied significantly. However, the study did not cover human factors, meaning traits contributing to the reasons why success in the growth-oriented companies was so mixed.

Mäkinen (1988, 1993) investigated forest machine entrepreneurs’ profitability, while at Metsäteho Ltd profitability from a customer perspective was analysed by Rajamäki and Heikka (1990). Mäkinen (1988, 1993) also studied the effects of strategy and competiveness on success, as well as forest machine entrepreneurs’ profitability, but the role of growth was not considered. Rajamäki and Heikka (1990) analysed the size of companies vis-à-vis profitability and factors affecting profitability. Penttinen et al. (2009) studied the economic development prerequisites of
forest machine companies in Finland, but growth itself was not looked at. Mattsson (1997), Lundberg (2000), Hultåker and Bohlin (2004), Hultåker (2006) and Liden (1995) examined the economics and business development of forest machine entrepreneurs in Sweden, while LeBel and Stuart (1998) studied the causes of efficiency variations in forest machine companies in North America.

**Theoretical framework**

The OECD (1998, p. 11) proposed the following definition for entrepreneurship: “Entrepreneurs are agents of change and growth in a market economy and they can act to accelerate the generation, dissemination and application of innovative ideas […] Entrepreneurs not only seek out and identify potentially profitable economic opportunities but are also willing to take risks to see if their hunches are right”. Shane and Venkataraman (2000) defined entrepreneurship as “the nexus of two phenomena: the presence of lucrative opportunities and the presence of enterprising individuals”. However, definitions of the term are abundant.

Edith Penrose (1959) characterized the growth of a small company as follows: "The term ‘growth’ is used in ordinary discourse with two different connotations. It sometimes denotes merely an increase in amount; for example, when one speaks of ‘growth’ in output, export, and sales. At other times, however, it is used in its primary meaning implying an increase in size or improvement in quality as a result of a process of development, akin to natural biological processes in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object".
A company can grow by many ways, but basically there are three different growth strategies: organic growth, diversification and acquisition or merge. From these, organic growth is the most common way to grow. However, organic growth is quite slow especially when compared to acquisition or merge. At the same time acquisition and merge are more risky and they demand more capital and planning. Diversification to another sector demands new kind of equipment and tasks. It demands learning, but it can raise the value of the main business also. In this study, outsourcing is also taken into account.

The process of growth is very complex and time-consuming for the entrepreneur, and thereby the decision to grow is an important entrepreneurial act. However, this decision also needs strong motivation as well as specific goals which are as important in successful growth. The prime axiom of goal-setting theory is that specific, difficult goals lead to higher performance compared to when one strives to simply “do one’s best” (Locke, 1966; Locke & Latham, 1990; Heslin et. al., 2008). According to Baum and Locke (2004), goals set by entrepreneurs themselves have a significant impact on growth success growth. Specific goals positively affect the performance of individuals and businesses.

Many theoretical and applied studies concerning the traits of an entrepreneur have been done. Four of the most influential theoretical viewpoints with respect to this study are that of Schumpeter (1934), McClelland (1961), Rotter (1966), and Bateman and Crant (1993). According to Schumpeter (1934), an entrepreneur is a person who functions as an innovator; that is he or she successfully introduces new combinations to the market forces. One of the most distinguishing traits of an entrepreneur is his or her innovativeness. Schumpeter believed in so-called "creative destruction" in the market process where new information is important in entrepreneurship. Moreover, for Schumpeter, creative destruction makes the old obsolete.
McClelland's (1961) achievement motivation theory proposes that the factors influencing motivation are 1) willingness to take risks, 2) the need to achieve, 3) the need for power and 4) the need for affiliation. According to McClelland, financial success reflects success in work and therefore increases one's motivation towards work. Every entrepreneur must take risks to some extent; after all, opting for entrepreneurship is never risk-free. However, concerning growth it is up to the entrepreneur how the level of risk is perceived. McClelland also stated that achievement-motivated individuals prefer a moderate degree of risk on the way to becoming successful entrepreneurs.

Rotter's (1966) locus of control refers to an individual's generalized expectations concerning either internal or external control. According to Rotter, internal control beliefs improve learning because they motivate individuals towards active behaviour whereas external control beliefs can make individuals’ behaviour passive and hinder the adaptation to new information.

Bateman and Crant (1993) introduced the concept of proactive personality. A proactive personality is indicative of one who is unencumbered by situational forces and creates change within an organization (Bateman & Crant, 1993). Individuals (entrepreneurs) with a strong proactive personality confront and solve problems, and take advantage of environmental changes to improve their situation regardless of situational forces.

A relatively large number of studies concerning personal traits in relation to entrepreneurship in general have been made, and different problems have been identified with these. Gartner (1989) found that the concepts and definitions of personal traits used in the studies differ substantially as well as the characteristics associated with entrepreneurship. Stevenson and Sahlman (1987) found that character traits are not universal, as many successful and unsuccessful entrepreneurs have
characteristics which are not on the list. Criticism of the entrepreneurial traits research is also based on a lack of significant empirical findings to support the claim that entrepreneurs are psychologically “different” from the general population (Mueller & Anisya, 2000). However, only a small number of individuals are entrepreneurs. In this light, it can be seen that entrepreneurship demands something special that differentiates them from the rest of the population (Niittykangas, 2003).

Results

Research sample

The average age of the 23 interviewed entrepreneurs was 49 years and length of time as an entrepreneur 23.8 years. The average age of the companies was 31.9 years and the average time as a limited company 15.9 years. Of the 23 companies a total of 18 were family businesses. The companies employed an average of 24.2 people with mean age of 39 years. The companies owned an average of 13.5 forest machines of which 7 were harvesters. According to MeträTrans (2008) 60 companies in the sector owned at least eight forest machines. This means that the sample included a significant number of the sector’s large companies and a clear majority of its large growth-oriented enterprises. The education level of the entrepreneurs was rather low: nine entrepreneurs had no education after basic school and none had a university degree. All entrepreneurs were male.

The average turnover of the companies grew 107.5 percent from 2001 to 2007, reaching EUR 2.96 million in 2007. On average, turnover grew by 12.9 percent per year. Median growth was 106.1 percent to EUR 2.3 million by 2007. In 2001 external services generated an average of 2.3 percent of turnover whereas in 2007 the figure was 14.0 percent. The amount of money spent on
external services increased 116 percent from 2001 to 2007. Median net profit plummeted from 6.0 percent in 2001 to 2.7 percent in 2007 (Figure 1).

Figure 1. Development of turnover and net profit ratio 2001-2007.

Groups

The financial score method revealed that the companies experiencing growth between 2001 and 2007 clearly grew differently in financial forms (Figure 2). This gives us an interesting basis of analysis. Some companies grew unsuccessfully and others grew very successfully. The financial score method classified the 23 companies as follows: eight highly successful (financial score of over 50), seven moderately successful (financial score between 20 and 50) and eight less successful (financial score of under 20).
The highly successful group comprised medium-sized companies with an average turnover of EUR 2.8 million. These managed to increase their net profit ratio by 13.8 percent as they grew. The equity ratio remained at about the same level in 2007 as in 2001. The moderately successful group represents an average company of the sector when focusing on net profit ratio and on its development. This group clearly grew the fastest but the companies’ profitability weakened significantly. Their equity ratio, however, remained at a healthy level. The less successful group grew the slowest, and, even though the average equity ratio weakened even more, their average net profit strengthened slightly. However, the financial situation of less successful companies worsened to a critical level. Growth seems to have had a negative impact on moderately successful companies, but a positive impact on highly successful companies (Table 2). Relative standard deviation of turnover in 2007 varied the most among moderately successful companies (as they were also the largest companies on average) and the least among less profitable companies. The large variation of company sizes within the groups means that company size is not a good explanatory variable in this study.
Table 2. Financial development of the groups studied.

<table>
<thead>
<tr>
<th>Group</th>
<th>Turnover in 2007, '000€ (av./median)</th>
<th>Av. turnover growth from 2001</th>
<th>Net profit in 2007, % (av.)</th>
<th>Net profit change from 2001 (av.)</th>
<th>Equity ratio in 2007, % (av.)</th>
<th>Equity ratio change from 2001 (av.)</th>
<th>Turnover relative to std. dev. in 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Highly successful</td>
<td>2818/ 2361</td>
<td>93.6%</td>
<td>10.0</td>
<td>13.8%</td>
<td>61.2</td>
<td>-3.3%</td>
<td>67.6%</td>
</tr>
<tr>
<td>2. Moderately successful</td>
<td>4270/ 2903</td>
<td>148.0%</td>
<td>1.8</td>
<td>-74.1%</td>
<td>32.3</td>
<td>-35.4%</td>
<td>84.4%</td>
</tr>
<tr>
<td>3. Less successful</td>
<td>1920/ 1791</td>
<td>71.2%</td>
<td>1.4</td>
<td>6.8%</td>
<td>8.8</td>
<td>-28.0%</td>
<td>36.3%</td>
</tr>
</tbody>
</table>

Growth strategies

Companies’ growth strategies varied between these three groups. From the Table 3 it can be seen that the less successful group based their growth mostly on organic growth. It can be seen also that some companies use combined growth strategies, mostly among the moderately and highly successful groups. Less successful companies have the least subcontracting from turnover and three companies have no subcontracting at all. Only two companies grew by diversification and one by acquisition or merge. However, four companies in the moderately successful group grew by diversification and three by acquisition or merge. This shows that these companies clearly used much time in planning their growth and growth strategy. Companies in highly successful group grew also by many different ways outsourcing being very important part of the growth strategy.

Table 3. Used growth strategies.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Highly successful (8)</td>
<td>2.0 %</td>
<td>18.3 %</td>
<td>6</td>
<td>8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2. Moderately successful (7)</td>
<td>2.3 %</td>
<td>14.1 %</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3. Less successful (8)</td>
<td>2.7 %</td>
<td>7.6 %</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
It is interesting to notice that highly successful companies load much on subcontracting and less successful companies on the contrary the least. Less successful companies load the most on organic growth as highly and moderately successful companies use, on average, larger variations in growth.

**Entrepreneurial traits**

The results showed that highly successful entrepreneurs perceived themselves as more innovative, proactive and achievement motivated but less willing to take risks than other groups. Less successful entrepreneurs perceived themselves as less innovative, proactive and achievement motivated but more willing to take risks. The moderately successful group fell somewhere in between these two parameters. The largest difference between groups was in achievement motivation (0.81 points) and the smallest in innovativeness (0.56 points). Willingness to take risks was clearly the lowest among highly successful entrepreneurs than the other groups. A positive correlation was observed between financial success in growth and innovativeness, proactivity and achievement motivation. The correlation was negative in willingness to take risks.

The research sample included as many entrepreneurs with an internal locus of control as those with an external locus of control (10 each). Three entrepreneurs believed in both equally. External locus of control was found to be more common among the highly successful group but also among the less successful group. The moderately successful group clearly had a more internal locus of control: this was the case in five out of seven entrepreneurs. In the highly successful and less successful groups only three and two entrepreneurs, respectively, out of eight, had an internal locus of control (Table 4). Locus of control was found to be quite diverse and no correlation was found between locus of control and financial success in growth.
Table 4. Entrepreneurial traits.

<table>
<thead>
<tr>
<th>Group</th>
<th>Innovativeness</th>
<th>Willingness to take risks</th>
<th>Proactivity</th>
<th>Locus of Control†</th>
<th>Achievement motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>3.57</td>
<td>2.90</td>
<td>3.76</td>
<td>A: 10, B: 10, AB:3</td>
<td>3.63</td>
</tr>
<tr>
<td>1. Highly successful</td>
<td>3.88</td>
<td>2.47</td>
<td>4.06</td>
<td>A: 3, B: 4, AB:1</td>
<td>4.06</td>
</tr>
<tr>
<td>2. Moderately successful</td>
<td>3.50</td>
<td>3.07</td>
<td>3.86</td>
<td>A: 5, B: 2, AB:0</td>
<td>3.57</td>
</tr>
<tr>
<td>3. Less successful</td>
<td>3.31</td>
<td>3.19</td>
<td>3.38</td>
<td>A: 2, B: 4, AB:2</td>
<td>3.25</td>
</tr>
</tbody>
</table>

Growth motivation

Among the whole sample the main reason for growth was more work offered by current customers and the main goal was to improve profitability. However, growth motivation varied greatly between entrepreneurs and also between groups. More work offered was the main reason why highly successful entrepreneurs decided to grow. Other reasons were also related to business development, such as economies of scale and improving business. Highly successful entrepreneurs' main goal of growth was to increase profitability, but also to improve their business situation and gain more customers (polycustomership).

Among the moderately successful entrepreneurs’ main reasons for choosing growth was to establish an area entity and increase profitability. Area entity means in this case a monopoly situation or a very strong local position logging certain area for a customer. Another reason was the greater amount of work offered by current customers. These entrepreneurs’ goals were quite similar, as were their reasons for choosing to grow. Four entrepreneurs mentioned that achieving area entity was their main goal of growth, as well as improving profitability.

† Locus of Control, A: Internal expectations, B: External expectations, AB: Both as much (50/50).
In the less successful group the range of answers was wider (Table 5). The main reasons for wanting to grow were greater amount of work offered by current customers, achieving higher profitability and achieving area entity. Other reasons included coincidentally won tenders, year-round employment, staying in business, developing greater know-how, and economies of scale. The main goal of three entrepreneurs was to improve profitability. Other goals were to become larger locally, to offer more services and to stay in business. However, one entrepreneur was not able to name any specific goal, and one mentioned that “coincidental growth had no goals”.

Highly successful entrepreneurs chose growth mainly at the request of their customers, and their goals were largely financial. Moderately successful entrepreneurs had area entity as their main reason for wanting to grow; this was also its main goal. The reasons why less successful entrepreneurs opted for growth were very diverse, but the main reason was to improve profitability.
Table 5. Entrepreneurs’ growth motivation.

<table>
<thead>
<tr>
<th>Group</th>
<th>Reason for choosing growth</th>
<th>Goal of growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Highly successful</td>
<td>Future existence</td>
<td>Continuity</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered</td>
<td>Improved situation</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered</td>
<td>Profitability, better situation in negotiations</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered</td>
<td>Searching for limits</td>
</tr>
<tr>
<td></td>
<td>More customers (polycustomership)</td>
<td>Polycustomership, local domination (area entity)</td>
</tr>
<tr>
<td></td>
<td>Profitability, economies of scale</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Wanting improve business, become a local leader</td>
<td>More stable situation</td>
</tr>
<tr>
<td>2. Moderately successful</td>
<td>Wanting to keep area entity where workload has increased</td>
<td>Greater size locally, area entity</td>
</tr>
<tr>
<td></td>
<td>To establish area entity</td>
<td>Area entity</td>
</tr>
<tr>
<td></td>
<td>Searching for limits, more challenges, profitability</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>To improve business</td>
<td>Boosting business</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered</td>
<td>Area entity</td>
</tr>
<tr>
<td></td>
<td>To establish area entity</td>
<td>Area entity</td>
</tr>
<tr>
<td>3. Less successful</td>
<td>To establish area entity</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>To develop know-how</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered, year-round employment, profitability</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Coincidentally won tenders</td>
<td>Coincidence</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Increased amount of work offered, economies of scale</td>
<td>Larger scale of services, repair and maintenance more economical</td>
</tr>
<tr>
<td></td>
<td>To establish area entity</td>
<td>Greater size locally</td>
</tr>
<tr>
<td></td>
<td>Staying in business</td>
<td>Staying in business</td>
</tr>
</tbody>
</table>

Discussion

The results of the present study were somewhat unexpected based on earlier applications of current theories. These theories suggest that high innovativeness, willingness to take risks, proactivity and achievement motivation should be found among successful entrepreneurs. They also suggest that internal locus of control would be more common among successful companies.
However, this study found that goals and reasons for wanting to grow are more complex, and are not necessarily good explanatory variables alone. After the growth decision was made, the applied growth strategy varied much between groups. It was also found that the somewhat controversial traits theory does work as an explanatory factor in this sector.

The study found that highly successful entrepreneurs perceived themselves as highly innovative, proactive and achievement motivated. However, they were not that willing to take risks compared to the two other groups and their locus of control was more external than internal. It is possible that this greater external locus of control could be explained by the reasons for choosing growth; highly successful entrepreneurs usually grew at the request of their customers. However, the main goal of growth was to increase profitability and develop the business. The chosen growth strategy was clearly different from the business strategy before growth.

Less successful entrepreneurs perceived themselves as relatively less innovative, proactive and achievement motivated. They were more willing to take risks compared to other groups and their locus of control was strongly external. Their growth reasons were varied, but originated more from the entrepreneur himself than from the customer. The main goal of growth was to improve profitability. Their high willingness to take risks could be due to a poor financial situation even though they grew the slowest. These companies grew mainly organically.

Moderately successful entrepreneurs were in the middle-ground in terms of innovativeness, willingness to take risks, proactivity and achievement motivation. However, it was surprising that among these entrepreneurs the locus of control was strongly internal, as their financial situation worsened the most. Considerably weakened profitability could be explained by their goals: moderately successful entrepreneurs’ main goal of growth was to establish area entity and not
greater profitability. This can be interpreted to mean that these large entrepreneurs chose growth in order to maintain or achieve area entity, as they use growth as a defense mechanism vis-à-vis their market situation. Companies in this group grew the fastest and they used a wide scale of growth strategies.

As self-perceived innovativeness, proactivity and achievement motivation correlated positively with success, willingness to take risks correlated negatively. However, the case of locus of control was not so straightforward. Willingness to take risks was also strongly related to financial situation, as highly successful entrepreneurs possibly did not perceive that much risk in growth because of their good financial situation and more work offered by current customers. Among less successful entrepreneurs it seemed that they hoped that growth would answer their weak financial situation, but the impact of growth was not fully realized. Less successful entrepreneurs’ goal of growth was primarily to increase profitability (which they did to some extent, but to the detriment of equity ratio), yet they were not able to improve their business model or efficiency.

Less successful companies changed their business model in growth very little and relied on organic growth. However, moderately and highly successful companies sought and compared growth methods much after the growth decision. They increased very much outsourcing, but grew also often diversifically and through acquisitions or mergers. It was also found that large-scale outsourcing seems to be quite profitable.

In conclusion, highly successful growth-oriented forest machine entrepreneurs perceived themselves as innovative, proactive and achievement motivated, but not as risk-takers. Their external locus of control can be explained by the fact that they grew “passively” at the request of customers. It seems that highly successful entrepreneurs’ high innovativeness, proactivity and
achievement motivation as well as profitability-related goals has a great impact on business development, which can be seen in chosen growth strategies and from their successful implementation. High internal locus of control (“active” growth) was found among entrepreneurs whose goals were more concerned with local area entity domination and not so much with increasing profitability. It is possible that entrepreneurs who grew passively used more time in developing their business model, and therefore their financial situation and the effects of their growth were better known.

This study supports the results of a study by Soirinsuo and Mäkinen (2009) which found that growth does not correct the fundamental reason for a company’s poor performance. Growth is a poor answer to trying to turn a low-profit company into a higher-profit one, but is a rather good way for a financially sound company to increase profits (Soirinsuo & Mäkinen, 2009). In many cases less successful companies had also financial-related goals, but they perceived more risks in growth and they did not improve or change their business model much as they grew. This supports the finding that they perceived themselves as less innovative, proactive and achievement motivated. In this light, the traits play an important role in successful growth and they can anticipate behaviour in growth.

Conclusions

The conclusions of this study support the view that goal setting and the traits of an entrepreneur have a significant influence on growth success (Niittykangas, 2003; Locke, 2004). Goal setting should be related to financial values, as large size in itself does not guarantee better profitability. It should be remembered that growth is a process and its results can be seen either positive or negative. Locus of control has little impact on successful growth, probably because of the nature of the sector
or the simplicity of the concept. However, high innovativeness, proactivity and achievement motivation combined with clear and specific financially related goals are important features among highly successful growth-oriented forest machine entrepreneurs.
References


A study on the critical success and failure factors affecting the development of small business

Dr. P. Jyothi

Dr. T.J. Kamalanabhan

Abstract

Small and Medium Enterprises play a vital role for the growth of an economy. Sustainability has always been the focus of practitioners, researchers and policy makers. The present study attempted to study the gender differences in perceptions of critical success and failure factors affecting small business. Data was generated from 50 (25 male and 25 female) small and medium business owners and applying appropriate statistical tools. The study found no significant differences in genders in the perception of critical success and failure factors. Need for achievement motive and feelings of independence seem to be the guiding factors for becoming entrepreneurs. Small firms identified fear of failure and lack of customer acceptance as hindrances at the start of the enterprise. They consider team work, knowledge and experience as important while larger firms consider participatory management and planning as important.

Key words: small business; critical success and failure factors; achievement motivation; attribution theory.

Introduction:

Small and Medium enterprises play a vital role for the growth of Indian economy by contributing 45 percent of the manufacturing output, 40 percent of total exports of the country, 59 million in employment, in 28 million units throughout the country, create one million jobs every year and produces more than 8,000 quality products for the Indian and International markets. (Source: Annual Report – 2009-2010 Micro Small and Medium Enterprises – Government of India). Indian market is growing rapidly and Indian industry is making remarkable progress in various Industries like manufacturing, precision engineering, food processing, pharmaceuticals, textile & garments, retail, IT, agro and service sectors.
The most common argument in favor of SME’s is that they create substantial job opportunities as they use relatively labor intensive technologies. SME’s employ more people per unit of investment as compared to large firms. Thus, a given amount of money will create more jobs if it is spread over a large number of SME’s than if it is focused on few large companies.

Despite its commendable contribution to the nation’s economy, MSME sector faces a number of challenges like absence of adequate and timely banking finance, limited knowledge and non-availability suitable technology, low production capacity, ineffective marketing and identification of new markets, constraints on modernization and expansions, non availability of highly skilled labor at affordable cost, follow up with various agencies in solving regular activities and lack of interaction with government agencies on various matters. Hence, sustainability of small business is a matter of serious concern. Surviving tough competitions, meeting quality standards and customer expectations have become an elusive factor and it becomes natural that researchers focus attention towards it. (Source: Small and Medium Business Development Chamber of India – 2009).

A common economic index of development has been the use of rates of growth of per capita Gross National Product (GNP) to take into account the ability of a nation to expand its output at a rate faster than the growth rate of its population. Development brings changes in economic life as are not forced upon it from without but arise by its own initiative from within. Innovators and producers initiate economic changes and consumers are educated by them if necessary. Carrying out the combination of productive factors is called Enterprise which is a fundamental phenomenon of Economic Development.
Small businesses are generally regarded as the driving force of economic growth, job creation, and poverty reduction in developing countries. They have been the means through which accelerated economic growth and rapid industrialization have been achieved (Harris and Gibson, 2006; Sauser, 2005; Arinaitwe, 2006; Kiggundu, 2002; Yusuf and Schindehutte, 2000; Birch, 1981, 1987). While the contributions of small businesses to development are generally acknowledged, entrepreneurs face many obstacles that limit their long-term survival and development. Research on small-business development has shown that the rate of failure in developing countries is higher than in the developed world (Arinaitwe, 2006).

A positive relationship has been documented between small-business development and economic growth in developed countries (Harris and Gibson, 2006; Monk, 2000; Sauser, 2005; Birch, 1987; Birch, 1981).

**Entrepreneurship – Economic Development:**

In the process of Economic Development Entrepreneurs play a pivotal role. The sense of high need achievement and motivation introduced by entrepreneurs bring about the required necessities in a class society which transform the perception of economic thinking which is necessary to bring about Economic Development. Timmons (1978) has suggested five human qualities which are conductive to economic development:

- an interest in material well being
- an interest in techniques and in innovation
- an ability to look ahead and a willingness to take risks
- Perseverance and
- Ability to collaborate with other people and to observe certain rules.
According to Kilby (1971) the entrepreneur performs the following major tasks:

Exchange relationship

Practical administration

Management control and technology

The above activities involve decision making under conditions of uncertainty. Kilby concludes that the entrepreneurial performance in the above rules is vigorous and effective.

Three major phases of national economic development process may be identified viz: factor driven economies, innovation driven economies and efficiency driven economies. Examining the multiple components of entrepreneurial activity allows us to explore differences among the three major phases. New business activity is expected to be high in factor – driven economies, because it is motivated by economic necessity. In innovation driven economies the proportion of opportunity driven entrepreneurship is expected to be higher than in factor and efficiency driven economies. Entrepreneurial aspiration reflects the qualitative nature of entrepreneurial activity. Product and process innovation, internationalization, ambition for high growth are regarded as hallmarks of ambitions or high aspiration entrepreneurship. These aspirations, when they are fully realized can significantly affect the economy.

However, sustainability is important in business and more particularly to small and medium size businesses (Denis and Mario, 2003). To remain competitive, businesses need to improve efficiency and performance. Efficiency is increased by lowering costs and indulging in less wastage. Maintaining good interaction with stakeholders is another aspect of sustainability. Small businesses are more reliant on a few key customers or critical suppliers and need to maintain relationships through
consistent dialogue. Efficiency is also increased by reporting and sharing important information. For small businesses to be actively involved in sustainable development, they need to adopt environmentally sound business principles and translate these into actions.

The high figures of SME inject economic variety (Hannan and Freeman, 1989) and generate competition, positive for economic output (Porter 1990). Features such as flexibility, innovativeness and problem-solving orientation are considered as key factors for SME success (Lin 1998).

After the advent of New Economic Policy in 1990, in India, specific strategies for the improvements of conditions of small and medium enterprise has become an important subject; it has also gained political support by way of legislation. The Micro, Small and Medium Enterprise Act of 2006 have been introduced to provide support growth and stability of Small and Medium Enterprises.

**Review of Literature:**

Research indicates that failure of SME is high, within the first years after starting. Timmons (1994) shows that over 20 percent of new ventures fail within one year and 66 percent within six years. Other researchers like Paffenhöhlz (1998) and Woy wode (1998) state that approximately 50 percent of the small start ups survive for more than five years.

Fairlie & Robb (2009) found that female owned businesses are less successful than male owned businesses because they have less startup capital, less business human capital acquired through prior-work experience in a similar business and less prior work experience in a family business. It was also found that female business
owners work fewer hours and may have different preferences for the goals of their businesses, which may have implications for business and outcomes.

Tim Mazzarol et al (1999) sheds light on the process leading to new enterprise formation and identifies the impact of some select demographic variables on business start-ups. Gender, previous government employment and recent redundancy were identified as having potential negative influence on small business formation.

Temtime and Pansiri (2004) investigated the perceived critical success / failure factors affecting the development of SME’s and found that human resources development, Organizational development, managerial background, managerial leadership and competitive strategy affect the performance of SME’s. Important relationships were also found between the perceived critical success and failure factors and firm specific demographic variables such as ownership status, experience and operating period.

Although more and more women are owning and managing small businesses, research on women’s network is less prevalent than research on male-dominated networks. Smeltzer and Fann (1989) explain that women’s business networks are the result of a deliberate strategy of linking women with other women to expand contacts, provide successful role models for each other, generate solutions to problems and disseminate information. Women have not broken into the formal male dominated network and prefer to communicate with women.

Scheers and Radipere (2005) analyses the perceptions of small business owners on managerial skills, whether gaps exist between managerial skills that owners should have and those that they actually possess. The study confirms that lack of managerial skills in small business owners was considered by the respondents as the main reason why small businesses fail in South Africa. Small business owners
lack managerial skills such as financial, marketing and human managerial skills to operate their businesses successfully. The challenge is to improve the managerial skills of small business owners.

Tess and Beverly (2000) reports the results of a survey conducted to obtain detailed information concerning Australian restaurant and catering operators’ perceptions of their industry. Through content analysis, several factors were identified that respondents perceive as important to the success of their business or as increasing the difficulty of operating their business. In particular, five broad success/difficulty factors emerged, relating to product, staff, financial, environmental and customer issues.

Okpara, Wynn, Pamela (2007), conducted structured interviews and a survey and gathered data from about 400 small businesses in Nigeria to find the principal constraints to success, as, including poor management, lack of capital, corruption, weak infrastructure, poor recordkeeping and so on.

Franco and Haase (2009), attempted to identify factors for poor performance and failure faced by small and medium-sized enterprises. Research reveals that the most important factors are limited access to finance, poor market conditions, inadequate staff, and lack of institutional support, as well as co-operation and networking.

Yu Da and Bernstein (2000), explores a variety of personal variables that might be expected to have some influence on small business owners’ perceptions. The results indicate strong support for a moderating effect due to the economic environment. In addition, significant support for age and education variables was evident. Different from many previous studies, variables such as religion, gender,
marital status, and country of origin showed no significant difference in the owner’s perception.

Cliff (1998), examined the attitudes of entrepreneurs towards growth and finds novel insights into the factors affecting an entrepreneur’s growth decision and desired pace of expansion.

Boden and Nucci (2000), examined the relationship between owner and business characteristics and business survival between men and women. The mean survival rate of male-owned businesses is higher than those owned by women.

Astebro and Berahardt (2003), investigated the relationship between the survival of new small businesses and bank loans. Having a bank loan was a positive predictor of the survival of start-up companies and the findings enabled some inference about the process of loan source selection and the bank’s loan granting process.

Headd (2003), states that new firms are believed to have high closure rates and these closures are believed to be failures. Tracking series showed that businesses were successful at closure. Factors that were characteristic of closure – such as having no start-up capital and having a relatively young owner were also common in business considered successful at closure. Hence, a few defining factors may be isolated leading to true failures.

Recognizing the contribution of SME’s, the present study attempts to investigate the perceptions of critical success and failure factors affecting the small businesses. The study would also like to explore whether the perceptions of entrepreneurs are related to several psychological theories of Achievement motivation (McClelland 1961) and Attribution theory (Heider, Kelley 1973).
**Theoretical Constructs:**

**Perceptual Process**

Perception is the cognitive process which involves the selecting, organizing, and interpreting the stimulus. The key to understanding perception is to recognize that it is unique interpretation of the situation. Perception also influences behavior and the perceptual process is mediated by environmental, that is, external and internal processes like learning and motivation. A selective perceptual process enhances our understanding of the stimuli. Further increased self perception would result in increased understanding of one’s self. This would result in exercising greater internality for causal behavior. (Heider 1958)

**Achievement Motivation Theory:**

Personality of an individual is mostly described in terms of motivation and aspirations. (Maslow 1951; McClelland 1961). The need for achievement motive is the inner urge of an individual to excel in a competitive situation. It is a need which is innate as well as a result of socialization practices. The achievement motive is directly related to performance of an individual. McClelland has identified the following characteristics of high achievers: moderate risk taking, immediate feedback, accomplishment, preoccupation with the task and being independent. McClelland further broadened his research to encompass the effect that achievement motivation has on entire societies and the economic rise and fall of civilizations. He found a positive relationship between the level of achievement motivation and the level of economic development of a given society. A society whose populace generally exhibits high n Ach will experience economic growth and prosperity. Entrepreneurs were also found to be high on these characteristics which describe high achievers.

**Attribution theory:**
Attribution theory has roots in all the pioneering cognitive theorist’s work (e.g., Lewin and Festinger - 1946), in de Charm’s ideas on cognitive evaluation, and in Bem’s (1972) notion of “self-perception, “the theory’s initiator is generally recognized to be Fritz Heider. Heider believed that both internal forces (personal attributes such as ability, effort, and fatigue) and external forces (environmental attributes such as rules or the weather) combine additively to determine behavior. He stressed that it is the perceived, not the actual determinants, that are important to behavior. Employees who perceive internal control feel that they personally can influence their outcomes through their own ability, skills, or effort. Employees who perceive external control feel that their outcomes are beyond their own control; they feel that external forces control their outcomes. Important I that this perceived locus of control may have a differential impact on their performance and satisfaction.

As stated before, the origins of poor performance and failure of SME have various root causes. However, what individuals judge to be the underlying cause of events does not always correspond to the real situation. Perception of failure is a subjective phenomenon and, thus, frequently biased or in error. In this context, a research area that explains how people perceive circumstances and make judgments about problems is to be related to attribution theory. This social psychology construct was mainly developed by Heider (1958), Kelley (1967) and Weiner (1979, 1985). For Kelley (1967), attribution relates to the process through which individuals deduce or perceive the causes of events, the behavior of others, or the dispositional properties of any entity in the environment. Herein, through affective and cognitive reactions, people search for causes in a variety of domains, and typically either within themselves or within their environment.
In this sense, the attribution theory predicts that individuals are likely to ascribe their failures or mistakes to external causes, attributing causes to situational factors rather than blaming themselves. Fiske and Taylor (1991) underpin “the fundamental attribution error is to attribute another’s behavior to dispositional qualities, rather than to situational factors”. For the opposite, individuals tend to attribute their own problems to situational factors. Moreover, literature highlights that attributions may be self-serving or hedonic, as unfavorable outcomes are typically attributed to external forces (Miller and Ross 1975; Zuckerman 1979). In other words, people prefer to be a victim of circumstance rather than of their own doing (Zacharakis et al. 1999). When analyzing internal and external causes, it was Heider (1958) who firstly described the key socio-psychological components. In his view, internal determinants include ability and effort, whereas the main external factors are task difficulty and luck.

Applied to the small business context, Tang et al. (2008) combined both models and generated two attributional styles of entrepreneurs: (1) an internal attributional style depending on causes such as ability and effort and (2) an external attributional style based on task difficulty and luck. For our attributional analysis, we also follow Heider’s (1958) and Weiner’s (1979) taxonomies, bearing in mind the failure factors stated before while adding a few specific elements. We consider ability, social skills, and knowledge to be internal causes, stemming from the inside of the individual. In contrast, we regard market conditions, institutional support, and luck to be external causes, originating from the environment. Overall, we believe that SME owner–managers will attribute their difficulties more likely to external factors, arguing that the causes of failure were market forces rather than poor management. In
the same vein, Zacharakis et al. (1999) argued that entrepreneurs are predisposed to attribute the current negative outcomes to external factors.

The studies cited in this literature review indicated that issues such as capital, management, infrastructure and lack of expertise are major obstacles to small business development. Other factors that affect small business development also need to be investigated such as poor infrastructure, low demand for products and services and the inability to use or acquire technology.

**Objective of the study:**

The present study is undertaken to find out the gender differences in perception of critical success and failure factors affecting the development of small business.

**Hypothesis:**

The following hypothesis was formulated to increase one understanding of the problem.

Hypothesis: There will be significant gender differences among entrepreneurs about the critical success and failure factors.

**Sample:**

The sample for this study consisted of 50 small business owner managers (25 male and 25 female) located in two southern states of India. Stratified sampling techniques were used to select the business owners. A total of 72 questionnaires were distributed and 53 were returned, but only 50 could be used for data analyses as 3 of them had to be discarded for lack of complete information. The owners were identified from the local small business associations and were personally contacted for administering the questionnaire. While administering the questionnaire, a discussion was also held with them.
Tools used for data collection:

A specially designed questionnaire was administered to gather information about the demographic aspects, data and dynamics about the firm.

The instrument was submitted for validation to a panel of four experts in Small business management in India. The experts were asked to review the items and determine if they were within the linguistic capabilities and understanding of Small business owners and managers. Minor modifications suggested by the experts were made and the questionnaires were distributed among the sample.

Results and Discussion

The data thus obtained was recorded, analysed and interpreted to discover new relationships or information. Both quantitative and qualitative analysis was obtained from the data. The quantitative analysis included descriptive statistics like mean and percentages. Further analysis of variance (ANOVA) was also calculated to determine if mean differences exist for two or more samples or treatments.

ANOVA is built on comparing variances from two sources: between group variance and within group variance. The ratio between them is called the F ratio. The ratio is interpreted in association with the degree of freedom associated with sample sizes. The procedure is to derive two different estimates of the population variance from the data and then calculate a statistic from the ratio of these two estimates. A significant F ratio informs us that the group means are not all equal. When the variances between groups relative to within groups are large then the F ratio is large. The larger the F ratio the more likely it is significant and that there are significant differences between some or all group means. A small F ratio close to one implies that
the two variance estimates are very similar and therefore there is no significant difference between means.

The objective of the study is to find out the gender differences in perception of critical success and failure factors among nascent and established entrepreneurs. The first part of the questionnaire was designed to gather information about firm characteristics. All the sample firms were small and medium enterprises in the services sector. Except for two firms all others qualified as sole proprietors, that is, they were the owner managers of the firm. The age range for women entrepreneurs was between 32-55 with a mean age of 43.5. The age range for the male entrepreneurs ranged between 34 – 56 with a mean age of 45. Except in two cases all other male entrepreneurs were graduates. Six of them also had diplomas in technical areas. With regard to women entrepreneurs, eighty percent of the samples, that is, twenty of them were graduates and the rest discontinued education after high school. With regard to prior work experience, only forty percent of the sample were associated with related firms and as such gained knowledge and launched their enterprises.

It was observed that women handled significantly smaller business (M = Rs. 7.92 lacs) when compared to men (M= Rs. 20.4 lacs) and significantly older enterprises (M= 21.8 years). However, there was no significant difference in the number of employees in their respective firms (men M = 18.8 and women M= 14.9).

In order to assess the knowledge and gain insights in to the entrepreneurial processes, open ended questions were asked about the reasons for starting of an
enterprise, any remarkable experiences and factors disturbing at the start of the firm and identifying some positive and negative experiences in the entrepreneurial career.

The overall reason for choice of entrepreneurship was found to be the feeling of doing something on one’s own and to experience the sense of independence (38 percent). This is followed by altruistic reasons (14 percent) such as providing service to humanity, employment etc. The last of the reasons stated was money (10 percent) or necessity and a chance to encash an opportunity (each with 6 percent) (table 1).

There exists no significant difference in the reasons between gender (chi-square = 6.4, df = 8, p>59.3)

However, the specific impetus to start an enterprise appears to be predominantly necessity or low pay in the current job (26 percent), followed by altruism (14 percent). This is followed by reasons such as drive for doing something on one’s own (24 percent). The last of the reasons appears to be opportunity encashment (6 percent) (table 2).

There is no association between gender and reasons at the start of the entrepreneurship (chi-square = 6.6, df = 7, p>.461)

When asked to identify the conditions and factors that disturbed at the startup of the firm, almost 90 percent of the respondents feel that the most important unsettling factor was finance. This does not differ across gender (chi-square = 5.02, df = 5, p>.413).
It is also observed that majority of the entrepreneurs feel that they have not achieved what they have set out as their dreams (56 percent). While the difference is not statistically significant (chi-square = 4.6, df = 2, p>.9), women appear to be more satisfied in their entrepreneurship when compared to men.

Of all the critical success factors identified, the one that takes first place is the knowledge in marketing and sales operation (38 percent) followed by lack of finance (26 percent) and customer acceptance (20 percent). There is no difference in such factors across gender (chi-square – 5.9, df = 4, p> .19).

Many entrepreneurs did not articulate any major domain that is a cause of concern (42 percent). 14 percent considered production/finance as risk areas. Therefore, there was not much clarity in the answer as to how they tackled the domain difficulties. About 20 percent suggested that they would work harder at the problem. Women articulated lesser domain problems and suggested fewer coping strategies than men (chi-square = 14.5, df = 5, p<0.01) (table 3).

It was also observed that entrepreneurs were able to abstract experience and knowledge as one of the important aspects/factor for entrepreneurship success (20 percent) followed by quality of products and services and customer acceptance (18 percent). The least cited reason was administration and internal processes (2 percent). While there is no statistically significant difference between gender with reference to citing of factors for entrepreneurial success (chi-square = 9.9, df = 9, p>.352), women
seem to cite ‘networking’ three times more important than men do and ethics/patience and hard work as four times more important than men do.

With reference to the positive experiences associated by virtue of being an entrepreneur were creating wealth by 32 percent and enjoying team work by 18 percent. This does not differ significantly across gender (chi square = 4.028, df = 8, p>.855). Similarly about 16 percent cite intrapersonal issues (e.g. emotional outbursts etc), 12 percent as financial crunch and 10 percent each for Human Resources and quality as major areas of negative experience. This does differ across gender (chi-square = 24.3, df = 14, p<0.04). Women have more negative experiences with competition, pollution control issues, and marketing. Men seem to dislike more issues in Human Resources.

**Meta-analysis with turnover split**

Firms with turnover higher than Rs. 14.1 lacs are categorised as high turnover firms and with lower than Rs. 14.1 lacs are categorised as low turnover firms. The following analysis checks if the responses are different for low and high turnover firms.

Statistically no difference with reference to reason for entrepreneurship (chi = 12.437, df = 8 and p > .13). However, high turnover firms cite wealth creation and necessity about 1.5 times more lower turnover firms, leading to hypothesise that passion for wealth creation and early stage compulsions may breed more success. Ecosystem support appears to be more important for small firms than for large even though is not statistically significant (chi = 5.3, df = 7, p >.622). Smaller firms may
be small because they started to encash an opportunity and was not a result of well thought out business plan.

Whether small or big, the positive experiences do not differ (chi = 5.1, df = 8, p > .73).

Neither does negative experience (chi = 8.2, df = 14, p>.87).

There are very similar unsettling factors across small and big firms (chi = 4.0, df = 5, p > .542) Sense of achievement too does not differ across size (chi = 0.55, df=2, p>.757)

While not statistically significantly different (chi = 7.8, df = 4, p >0.1), smaller firms cite more often fear of failure and lack of customer acceptance as fears that dominate start of entrepreneurship.

Small firms are more worried about competition, market potential and pricing. Larger firms are worried about quality issues and production risks. (chi =7.8, df =8, p > 0.45)

While there appears to be clarity in strategy for tackling domain problems, smaller firms appears to state that they resolve it by more hardwork and intelligence. Larger firms’ inability to come out with a strategic solution may be due to a realisation that they do not have solution to larger issues faced by them.

There is a statistically significant difference between small and large firms’ idea of what is important for success of entrepreneurship (chi = 18.5, df =9, p < 0.3). Small firms consider team work, knowledge and experience, ethics and patience as important take-aways. Larger firms consider participatory management and process & planning as important.
From the above results, it is then obvious that there are no significant gender differences about the critical success and failure factors associated with the firms. Confidence and feeling of independence seem to be the guiding factors in prompting the sample to become entrepreneurs. The urge to achieve, contribute and drive for doing something on one’s own appears to be prevalent among the sample. We may find some co-relations with the theoretical construct of achievement motivation as proposed by McClelland (1961) and the characteristics of high achievers. Some of them referred that their previous experience helped them substantially in the start-up process. Knowledge of the market, sales operations and customer feedback were identified as critical success factors. This confirms earlier research of Nandaram (2006).

Entrepreneurs also mention that having a good team is necessary. This also refers to starting with a partner and having congruent competencies meeting people. Entrepreneurs were also convinced that they possessed the relevant competency to start an entrepreneurial career by actually initiating a venture. These convictions were based on the perception of having control over the require competencies, which refer to the concept of self-efficacy and high internality of control. With reference to the difference between high turnover and low turnover firms the smaller firms often sight fear of failure and lack of customer acceptance dominate at the start of the entrepreneurs. Smaller firms are able to cope with their problems by hard work and intelligence where as the larger firms are unable to come out with it strategic solution. Small firms consider team work, knowledge and experience as important in the functioning of the enterprise where as larger firms consider participatory management and process on planning as important. Small businesses seem to be vulnerable in the business seem and face high fluctuations in projects and market demands which
makes it difficult to maintain a fixed team of staff. In essence, while some clarity emerged with regard to critical success factors. The same could not be found for critical failure factors.

Implications

The findings show three important implications for Small and Medium Enterprises support groups including the Government, Practitioners and Researchers in the areas of entrepreneurship and small business development. It is suggested that the entrepreneurship assistance programmes may be designed in such a way that the critical successes and failure factors may be identified. There is a need to incorporate the concepts of entrepreneurship in the school and college curriculum in a more rigorous manner so as to equip the potential entrepreneurs with domain knowledge and skills. Further Small Business Support Group may be created for guiding strategically and resulting in sustainability of the small business.

References


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<th>Tabel 1 – Showing Overall Reasons for starting of the Enterprise</th>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<th>Table 2- Showing Specific Reasons at the time of start of the Enterprise</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecosytem Support (e.g. family, friends)</td>
<td>6</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Altruism</td>
<td>7</td>
<td>14.0</td>
<td>14.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Continuing Family Business</td>
<td>1</td>
<td>2.0</td>
<td>2.0</td>
<td>28.0</td>
</tr>
<tr>
<td>To do something on one's own / independence</td>
<td>12</td>
<td>24.0</td>
<td>24.0</td>
<td>52.0</td>
</tr>
<tr>
<td>Opportunity Encashment</td>
<td>3</td>
<td>6.0</td>
<td>6.0</td>
<td>58.0</td>
</tr>
<tr>
<td>------------------------</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Past experience / Knowledge</td>
<td>6</td>
<td>12.0</td>
<td>12.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Leverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Necessity / less money in prev job</td>
<td>13</td>
<td>26.0</td>
<td>26.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Unclear Reasons</td>
<td>2</td>
<td>4.0</td>
<td>4.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3 – Showing the Domain of Difficulty among Entrepreneurs

<table>
<thead>
<tr>
<th>Domain</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Production / Finance Risks</td>
<td>7</td>
<td>14.0</td>
<td>14.0</td>
<td>14.0</td>
</tr>
<tr>
<td>Market Potential / Pricing</td>
<td>3</td>
<td>6.0</td>
<td>6.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Technology / Machinery</td>
<td>2</td>
<td>4.0</td>
<td>4.0</td>
<td>24.0</td>
</tr>
<tr>
<td>HR Area</td>
<td>3</td>
<td>6.0</td>
<td>6.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Customer Retention</td>
<td>4</td>
<td>8.0</td>
<td>8.0</td>
<td>38.0</td>
</tr>
<tr>
<td>Quality Issues</td>
<td>4</td>
<td>8.0</td>
<td>8.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Overall risks</td>
<td>4</td>
<td>8.0</td>
<td>8.0</td>
<td>54.0</td>
</tr>
<tr>
<td>No domain Specified</td>
<td>21</td>
<td>42.0</td>
<td>42.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Competition</td>
<td>2</td>
<td>4.0</td>
<td>4.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Creativity:

Creative destruction by creative entrepreneurs in creative industries.

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This paper investigates the process of creative destruction made by creative entrepreneurs in creative industries. Following Schumpeter’s argument about the advantages of being big notwithstanding, we examine the evolution of three creative entrepreneurs and their firms, Ed Catmull and John Lasseter from Pixar Animation Studios, Jimmy Wales from Wikipedia, and Guy Laliberté from Cirque du Soleil, whose activities have drastically changed the industry in which they are inserted. These three firms are clear illustration of the process of creative destruction. The paper uses a qualitative approach based on a series of narratives. This exercise, following the Schumpeterian research agenda, enhance our understanding of the dynamics of an entrepreneurial economy and provide us with greater insights into how different entrepreneurial traits and organizational forms contribute to the process of creative destruction.

Keywords: Creative destruction, creative industries, entrepreneurial process.
Empowerment, Innovativeness, Internationalization and Performance of Polish SMEs: a Conceptual Framework

Anna Michna, Anna Męczyńska, Roman Kmieciak, Renata Sękowska

Abstract

This paper presents a framework for investigating the relationships between employee empowerment, innovativeness, internationalization and firm performance. Based on current literature review, we claim that complex investigation of SMEs simultaneously including all these issues has not been conducted. Investigations of Polish SMEs have so far been few and fragmentary. In our opinion employee empowerment, innovativeness and internationalization (the sources of competitive advantages) intertwine and interconnect in a network of feedback relationships. Moreover, information technology (IT) can be used to strengthen the relationships. As a result of critical literature review, we have identified a research gap, built a conceptual model and stated hypotheses.

Introduction

This paper presents a framework for investigating activities of Polish small and medium-size enterprises (SMEs). We concentrate mainly on the following processes: employee empowerment, innovativeness, internationalization in the context of information technology (IT) capability. These issues are defined and discussed in the second part of this paper. We are interested in the impact of these processes on firm performance.

The purposes of the research were:

- analysis of the level of knowledge in this field - a critical review of the literature,
- identification of research gap,
• stating the hypotheses and building a conceptual model,
• preparing the survey instrument, determining sample selection,
• preparing empirical research,
• indicating the directions of future research.

Based on current literature review, we claim that complex investigation of SMEs simultaneously including all these processes has not been conducted. Some previous studies examined the relationships between these processes but had a fragmentary nature, limited to the relationships only between two issues. Our investigation combines previous work in this field and innovatory, complex approach. In our opinion employee empowerment, innovativeness and internationalization (the sources of competitive advantages) intertwine and interconnect in a network of feedback relationships. Analyzing the way in which previous researchers operated these issues, the need of analyzing them, particularly in SMEs, seems to be reasonable. The literature review confirms that previous research in this field has been mainly focused on large enterprises. Investigations of Polish SMEs have so far been few and fragmentary (Kucia 2009; Moszkowicz, and Potocka 2005; Pinoczek 2008; Daszkiewicz 2008; Poznańska 2009; Krupski 2009). This is the reason why we made an attempt at a complete analysis of the above mentioned issues and relationships in Polish SMEs.

As a result of critical literature review, we identified a research gap, built a conceptual model and stated hypotheses. Moreover, we prepared the survey instrument (the survey questionnaire) which will be used to verify the hypotheses in the course of empirical research. We intend to conduct studies of Polish SMEs from the Upper Silesia region. The region is the most industrial region of Poland and contributes 13 percent to Polish GDP. In this region GDP per capita is 32761 PLN, in comparison with average in Poland 30873 PLN [Central Statistical Office 2009]. The region is the main center of heavy industries (mining, metallurgy, machine industry). Until 1989, the economy of Poland was based on a system of
public ownership and administrative planning. At the moment the region is in a period of transition, experiencing rapid change as a consequence of economic transformations in Poland. In 2004 Poland became a member of the European Union what has opened a new opportunities for economic development by intensifying contacts with other EU members and access to European funding. Traditional industries undergo restructuring and modernization. Investments in new technologies which are friendly to the environment are perceived as the right direction for the region’s further development. Collaboration between many research centers and entrepreneurs is expanding. Enterprises from this region are one of the most innovative SMEs in Poland - over 16 percent small and 42 percent medium-size enterprises are regarded as innovative enterprises in comparison with average in Poland 14 percent and 37 percent correspondingly [Żołnierski, 2008]. Moreover, this region has the second (right after the Warsaw region) biggest number of registered and operating Polish SMEs.

**Literature Review**

**Empowerment**

Appropriately directed human resources management may contribute to improve firm competitiveness and build a permanent market advantage. Employee empowerment is one of the key concepts of human resources management. Specificity of human resources management in SMEs results from: high level of job autonomy (Kallenberg, and Van Buren 1996), close working relationships with managers (Ingham 1970), a less developer division of labor in small firms than is the case in large company (Tsai, Sengupta, and Edwards 2007). On the other hand, some disagreement appears in the studies because it is know that together with small firm growth, owners-managers are reluctant to delegate their authority to subordinates. Empowerment is examined from two perspectives: individual and organizational. From individual perspective, empowerment is a multidimensional cognitive
state – the perception of being empowered. From organizational point of view, empowerment is set of activities and practices of managers leading to increase employees’ contribution to overall organization’s success (Niehoff, Moorman, Blakely, and Fuller 2001). In the present study we focus on organizational level and assume the following definition: "Empowering people means encouraging them to become more involved in the decision and activity that affect their jobs. It means providing them with the opportunity to show that they can come up with good ideas and that they have the skills to put these ideas into practice" (Smith 1996).

Empowerment, both from individual and organizational perspective, is a multidimensional construct. From organizational viewpoint, Petter, Byrnes, Choi, Fegan, and Miller (2002) defined seven dimensions of empowerment: power, decision making, information, autonomy, initiative and creativity, knowledge and skills, responsibility. Some researchers emphasize only transfer of power from upper to lower levels of the organization and focused on this dimension alone (Pitts 2005).

Prior studies of employee empowerment issue have focused on large companies. Factors which affect on the empowerment process have been extensively discussed (Petter, Byrnes, Choi, Fegan, and Miller 2002). Employee participation in organizational change, development of employee competencies, access to information, and employee participation in decision processes are studied. The empowerment process is investigated in linkage with: manager’s character, characteristics of organization and information technology (Choi 2006; Pitts 2005; Psinos, Kern, and Smithson 2000). The results of empowerment are considered with reference to job satisfaction, loyalty behavior and employee commitment (Wang, and Lee 2009; Niehoff, Moorman, Blakely, and Fuller 2001). Relationships between empowerment and firm performance or innovativeness have been insufficiently examined (Hempel, Zhang, and Han 2009; Spreitzer 1995).
Taking into account characteristics of SMEs, the fact that employees in SMEs perform more various tasks in comparison with employees in large firms, and limited empirical research in this field, investigation of employee empowerment in SMEs is particularly interesting. The researchers have analyzed: job autonomy, (Tsai, Sengupta, and Edwards 2007), relationship between empowerment and employee job satisfaction (Appelbaum, and Kamal 2007), and relationship between empowerment and internationalization (Gabrielsson 2007). However, complex investigation of relationship between employee empowerment and performance of SMEs has not been conducted.

**Innovativeness**

The terms innovation and innovativeness have many different definitions and are used in the different disciplinary literatures of economics, entrepreneurship, business and management, technology, science and engineering (Baregheh, Rowley, and Sambrook 2009). For example, Wang and Ahmed (2004) define organizational innovativeness as "an organization’s overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behavior and process". Innovativeness is frequently regarded as a measure of the degree of "newness" of an innovation (Garcia, and Calantone 2002) or some kind of measurement contingent on an organization’s proclivity towards innovation (Salavou 2004). According to Hurley and Hult (1998) innovativeness is "the notion of openness to new ideas as an aspects of a firm’s culture."

Innovation refers to a process that begins with a novel idea and concludes with market introduction (Freeman, and Engel 2007). Plessis (2007) proposes that innovation is "the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services".
Innovation is often defined as the adoption of new products or processes, but the term "new" is ambiguous. Backer and Whisler (1967) suggest defining innovation as the first of early use an idea by one of a set of organizations with similar goals. Some authors define innovation as the creation of any product, service, or process which is new to a business unit or organization (Tushman, and Nadler 1986; Damanpour 1991). Consistent with these approaches, some studies use different dimensions to measure innovations: newness to customers, uniqueness for the market or newness to the firm (Salavou, and Avlonitis 2008). Some definitions of innovation include also the concept of successful commercialization (Cumming 1998). Baregheh, Rowley, and Sambrook (2009) propose a general and integrative definition of organizational innovation that captures its essence: "Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace." For the purpose of this study, we accept this definition.

As definitions suggest, the notion of innovation in multidimensional and may be present in various forms. For example, Wang and Ahmed (2004) identified five main areas of organization’s overall innovativeness: product innovativeness, market innovativeness, process innovativeness, behavioral innovativeness, and strategic innovativeness. Similarly, in Oslo Manual (OECD/Eurostat 2005) four types of innovations are distinguished: product innovations, process innovations, marketing innovations and organizational innovations. These dimensions are common in literature and include overall innovative activities in firms.

Previous research examined organizational properties that enhance or hinder innovativeness. Studies have identified determinants of innovation and indicated the role of such organizational factors as: formalization, centralization, external and internal communication (Damanpour 1991; Jansen, Van Den Bosch, and Volberda 2006). Many measures have been developed that attempt to assess factors affecting organizational
creativity and innovativeness (see Mostafa 2005; Amabile, Conti, Coon, Lazenby, Herron, 1996). For example, creative climate questionnaire (CCQ) includes ten dimensions: challenge and involvement, dynamism, freedom, trust/openness, idea time, playfulness/humor, conflict, idea support, debate and risk-taking (Ekvall 1996).

**Internationalization**

Currently the issue of internationalization of economic activity is often discussed in specialist literature as one of the ways leading to anticipated development and increase of an enterprise’s value. Internationalization of enterprises also brings a positive aspect for the development of local, regional and national structures. Specialist literature emphasizes the specifics of presented issue from the point of view of many theories, concepts and models, but complex and uniform definition of this issue was not developed. It is emphasized that internationalization is: crossing of national borders in order to create the enterprise value (Knowles, Mughan, and Lloyd – Reason 2006), team of varied resources of the enterprise (internal and external), which in connection with psychosociological, cultural and political predispositions allow for its development beyond the borders of the country of origins (Fernandez, and Nieto 2005). The authors indicate that the abilities, competences and knowledge in the organization have a decisive impact on undertaking and effectiveness of international operations. (Ruzzier, Hisrich, and Antoncic 2006). The specialist literature defines internationalization as process of adjustment of the company’s actions (strategies, structures and resources) to the international environment (Che-Senik, Scott-Ladd, Entrekin, and Sham 2007). Additionally, the internationalization process is presented as the method for implementation of key elements of the company’s strategy (Daszkiewicz 2008). Internationalization is also considered as a process within which the companies open and respond to international abilities and threats, undertaking various tasks executed abroad
The activity defining internationalization is the execution of reactive (undertaking and strengthening of cooperation) and proactive (entering into new markets of potential customers) strategies with consideration of internal and external development barriers (Arranz, and Arroabe 2009). The specialist literature also presents the internationalization process in accordance with the enterprises’ extent of involvement into export activity. On this basis the companies are differentiated as: avoiding export orders, sporadically undertaking export activities, making export attempts, exporting to one or more countries, aspiring to take over a whole region or country and finally achieving global dimensions or born - global from the start.

On the basis of review of specialist literature for the needs of this research it is assumed that internationalization is "described as business activities which „cross national borders and intended to create value in organizations" (Knowles, Mughan, and Lloyd – Reason 2006). Additionally, internationalization processes shall be considered in the light of such attributes as: know-how, cooperation networks, IT and enterprising bases, as well as organization skills occurring in SMEs.

Keeping track with recent SMEs internationalization research it is found, that they comprised of the impact analysis of key success factors to functioning effectiveness (Crick, Bradshaw, and Chaudhy 2006; Wheeler, Ibech, and Dimitratos 2008). In the past also research of SMEs internationalization processes was executed in the context of individual aspects: know-how (Fletcher, Cassuli, and Jones 2007; Thomas – Morgan, and Jones 2009), company’s location (Westhead, Ucasaran, and Binks 2004; Reiner, Demeter, Poiger, and Jenei 2008), management staff’s skills (Anderson, Bookcock, Graham 2001; Manolova, Brush, Edelman, and Greene 2002; Knowles, Mughan, and Lloyd – Reason 2006), occurring cultural differences (Arranz, and Arroyabe 2009) and other factors beneficial for international expansion. The subject of research were SMEs with varied functioning specifics (family and
non-family companies) (Fernandez, and Nieto 2005), retail companies (Fillis 2004) and craft companies (Hutchinson, Quinn, and Alexander 2006) located in different places.

**Information technology**

IT capability has been conceptualized in terms of managerial and technological capabilities (Zhang, and Sarker 2008). Bharadwaj (2000) define firm’s IT capability as its "ability to mobilize and deploy IT-based resources in combination or copresent with other resources and capabilities". Prasad, Ramamurthy, and Naidu (2001) refer IT managerial skills to firms’ ability to use IT to support and enhance their distinctive competencies and skills in other business functions. Tippins and Sohi (2003) define IT competency as the extent to which a firm is knowledgeable about and effectively utilizes IT to manage information within the firm. For the purposes of this study, based on the definitions above, we define IT capability as "firm’s ability to acquire, deploy and leverage its IT related resources in combination with other resources and capabilities in order to achieve business objectives."

Review of the literature suggests that IT capability as a multidimensional construct. Bharadwaj, Sambamurthy, and Zmud (1999) perceive IT capability as a construct which is composed of six underlying dimensions: IT–business partnerships, external IT linkages, business IT strategic thinking, IT business process integration, IT management and IT infrastructure. Other categorization schemes have also been developed. For example, Tippins, and Sohi’s (2003) model consists of IT knowledge, IT operations and IT objects. Based on previous research, Wade and Hulland (2004) suggest a typology of eight key information systems resources: external relationship management, market responsiveness, IS-business partnerships, IS planning and change management, IS infrastructure, IS technical skills, IS development and cost effective IS operations.
Linking Between Empowerment, Innovativeness, Internationalization, and Firm Performance

Based on literature review we have found that studies of relationships between empowerment, innovativeness, internationalization and performance of SMEs are few and fragmentary and, moreover, there is a lack of simultaneous investigation of these processes. Table 1 presents empirical studies conducted so far in this field.

Table 1
Empirical studies on SMEs

<table>
<thead>
<tr>
<th>Authors</th>
<th>Characteristics of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innovativeness and firm performance</strong></td>
<td></td>
</tr>
<tr>
<td>Miguel Hernandez-Espallardo, and Elena Delgado-Ballester (2009)</td>
<td>Relationship between product innovation, market innovation, the industry’s five competitive forces and performance (218 Spanish manufacturing SMEs).</td>
</tr>
<tr>
<td>Carol Yeh-Yun Lin, and Mavis Yi-Ching Chen (2007)</td>
<td>Relationships between innovation and performance (877 SMEs in Taiwan).</td>
</tr>
<tr>
<td>Table 1</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Internationalization and firm performance</strong></td>
<td></td>
</tr>
<tr>
<td>Nelly Daszkiewicz (2008)</td>
<td>The influence of the size of firm, economic situation and cooperative on the realized export (761 SMEs in Poland).</td>
</tr>
<tr>
<td>Lianxi Zhou, Wei-ping Wu, and Xueming Luo (2007)</td>
<td>The comparison of the influence of kinds internationalization on performance in the context of functioning the social nets of the co-operation (250 SMEs in China).</td>
</tr>
<tr>
<td>David Crick, Robert Bradshaw, and Shiv Chaudhy (2006)</td>
<td>The comparison of the internationalization process family and not family SMEs in the context of performance beyond the borders of the country (22 SMEs in UK).</td>
</tr>
<tr>
<td><strong>IT and firm performance</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Innovativeness and IT</strong></td>
<td></td>
</tr>
<tr>
<td>Clay Dibrell, Peter S. Davis, and Justin</td>
<td>Investigation the mediating effects of information technology on the relationships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Internationalization and IT</strong></th>
<th><strong>Innovativeness and internationalization</strong></th>
<th><strong>Empowerment and internationalization</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna Thomas-Morgan, and Marian V. Jones (2009)</td>
<td>Examining the relationship between international entrepreneurship, innovation and international market performance (302 SMEs in Australia)</td>
<td></td>
</tr>
<tr>
<td>Pia Arenius, Viveca Sasi, and Mika Gabriellson (2007)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The comparison of advantages flowing from the use of solutions e-CRM on the international and national activity (286 SMEs in Irish).

The study the influence of knowledge, solutions of ICT, strategy and the channels of the sale on undertaken internationalizing (705 SMEs in UK).

The influence of Internet on internationalizing SMEs (a case study of a firm in Finland).

Most studies focus on psychological empowerment and consider individual perspective (Wang, and Lee 2009). Researchers combine empowerment with: job satisfaction (Ng, and Sorensen 2008) and loyalty, in relation to work performance (Niehoff et al., 2001). Relationship between empowerment and managerial trust has been also examined (Gomez, and Rosen 2001). There are few studies related to organizational level of employee
empowerment and simultaneously combining the issues which are the subject of this work. For example, Hempel, Zhang, and Han (2009) analyzed data from 94 Chinese high-technology companies and found that team empowerment is significantly related to team performance. Moreover, organizational decentralization and formalization of organizational processes enhance empowerment. A study of UK manufacturing organizations also suggests relationship between empowerment and firm performance (Psoinos, Kern, and Smithson 2000). The authors claim that "empowerment resulted from a desire to improve business performance and not as some form of charitable gesture," and "empowerment and IT/IS was an essential component of strategies such a BPR and TQM aimed at improving business performance." This study shows that IT facilitates decentralization and, as it was mentioned above, decentralization stimulates employee empowerment. Similarly, Wyner and Malone (1996), and Malone (1997) confirmed that IT can cause decentralization. Additionally, Hoffman (1994) claimed that empowerment is necessary for contemporary companies and needs to use new IT strategies.

The relationship between firm innovativeness and firm performance has been broadly investigated in literature. Studies focus mainly on large firms and associate innovation positively with performance (Calantone, Cavusgil, and Zhao 2002; Hult, Hurley, Knight 2004; Lee, and Tsai 2005; Chen, and Lee 2008). Empirical studies generally also support a finding that innovation is important determinant of firm performance in SMEs. For example, it was found that there is a positive relationship between innovation and financial performance (gross profit margin) (Low, Chapman, and Sloan 2007). Process innovation is positively related to financial performance and administrative innovation is positively associated with operating efficiency (Mavondo, Chimhanzi, and Steward 2005). Oke, Burke and Myers (2007) found that SMEs tend to focus more on incremental than radical innovations and this focus is related to growth in sales turnover. However, in some studies positive direct or
immediate effects have not been found. For example, Freel and Robson (2004) highlight a negative, at least in the short term, relationship between product innovation and growth in sales or productivity for manufacturing firms. Some studies show that, for example, learning orientation, market orientation or competitive forces have an effect on relationship between innovation and firm performance (Keskin 2006; Hernandez-Espallardo, and Delgado-Ballester 2009). Researches have been also conducted in developing countries (Keskin 2006; Lin, and Chen 2007). Nevertheless, the relation between innovativeness and firm performance has not been tested sufficiently in SMEs in Poland.

Empirical research conducted in different countries connects internationalization process and performance of SMEs. The literature highlights that SME involvement in international management and gaining international experiences have a positive effect on its financial (sales, revenues, profits) and non-financial (goal achievement, perceived success) measures. Moreover, collaboration with public sector (government support programs) facilitates small firms’ international activities (Wheeler, Ibech, and Dimitratos 2008). Empirical research shows correlation between firm size and increase the export activity of Polish companies. With the increase of firm size, collaboration is more developed and leads to the growth of export activity (Daszkiewicz 2008). Studies conducted among Chinese SMEs suggest that home-based social networks play a significant mediating role in the relationship between inward and outward internationalization and firm performance (Zhou, Wu, and Luo 2007). Export activities in family and non-family owned SMEs in the U.K. have similar impact on: sales volume, market share, and business profitability (Crick, Bradshow, and Chaudry 2006). Study of Swedish SMEs (Byberg 2007) shows that relationship oriented market communication has a significant effect on export performance, including number of foreign markets. Furthermore, collecting foreign market information has an effect on profitability of export and the control variables and other background variables, firm size and
region, have a significant influence on the amount of export markets. Spanish researchers (Arranz, and Arroyabe 2009) claim that larger firms achieve superior performance by internationalization and SMEs should participate in internationalization process by collaboration with other firms.

The literature presents the connection of the SMEs’ internationalization process with IT. For example, firms serving international markets place greater emphasis on electronic-customer relationship management (e-CRM) and reaping greater benefits in comparison with domestic firms (Harrigan, Ramsey, and Ibbotson 2009). Using internet technologies contributes to an increase of international sales and has a positive impact on the level of international diversification (Thomas-Morgan, and Jones 2009). The Internet enables to reduce direct costs which are related with geographical distance. Using the Internet as a sales channel reduces costs of firm adjustment to economic and legal conditions in other countries.

In conclusion, IT facilitates international development of SMEs and has particularly a positive effect on customer relationship management (Arenius, Sasi, and Gabriellson 2007). Wolff and Pett (2006) confirm that internationalization is positively correlated with growth performance and, moreover, is positively related to product and process improvements in SMEs. A study by O’Cass and Weerawardena (2009) also found a significant relationship between international entrepreneurship and organizational innovation intensity.

Empirical research of relationship between IT and firm performance mainly focus on large firms. A number of studies were conducted in US-based firms. For example, it was found that IT capability has a direct and positive impact on firm performance (Sanders, and Premus 2005); firms with high IT capability tend to outperform firms with low IT capability on a variety of profit and cost-based performance measures (Bharadwaj 2000); the relationship between externally focused IT capabilities and performance is stronger for firms operating in environments characterized by high dynamism, high munificence, and high
complexity (Stoel, Muhanna 2009). On the other hand, it was also found that firms’ total IT investment is not associated with firm performance (Aral S, and Weill 2007). However, SMEs differ from large firms in various ways. The characteristics of SMEs include for example: resource constraints, especially time and finance, personalized approach to management, a "survival mentality" and lack of strategic planning (Gilmore, Carson, O'Donnell, and Cummins 1999). Thus, it would not be correct to assume without results of empirical research that link between IT and performance in SMEs is the same as in large firms. However, empirical studies in this field are limited. In general, research suggests that SMEs benefit from using IT. For example, Shaw (2006) found a positive association between IT resources management activities and the ability to retain, respond and satisfy customers. Zhang and Sarker (2008) claim that the overall multidimensional IT capability has a significant and positive impact on the international performance, in contrast to external IT linkages and IT business process integration. Webb and Schlemmer’s (2009) results suggest that IT assets are related to Internet performance, but no affect IT assets on financial performance of SMEs. Moreover, the relationship between IT assets and financial performance is significantly negative for Internet-leading companies.

A review of literature reveals mixed result in regard to an effect of IT on firm performance. The inconsistencies can be attributed to different measures of IT and performance used in the studies. Some researchers argue that IT can not provide competitive advantage because it is too easily duplicated (Tippins, and Sohi 2003). Therefore, Bharadwaj, Sambamurthy, and Zmud (1999) claim that firms "should not focus on singular applications whose competitive advantage is short-lived but should focus on creating a firm-wide IT capability that enables continuous innovation and adaptation to changing environment." Furthermore, some researchers suggest that IT does not have a direct effect on firm performance but IT can be used to leverage other resources and strengthen their impact on
firm performance (Webb, and Schlemmer 2009; De Burca, Fynes, and Brannick 2006). For example, some previous studies have examined relationships between IT capability, firm performance and: organizational learning (Tippins, and Sohi 2003), customer orientation (Zhu, and Nakata 2007) or innovation (Dibrell, Davis, and Craig 2008).

The literature suggests complementary relationship between innovativeness and IT (Huang, and Liu 2005). Investment and adoption of IT are perceived as innovative activities and, on the other hand, IT can enable or facilitate innovation (Markides, and Anderson 2006). The relationship has been examined in SMEs. For example, Dibrell, Davis, and Craig (2008) found that the impact of innovation on performance is primarily indirect, felt via IT investment. Li, Merenda, and Venkatachalam (2009) claim that new product development is positively related to the extensive use of business process digitalization.

**The full conceptual framework**

Based on current literature review we claim that there have been attempts to explain the impact of employee empowerment, innovativeness and internationalization on firm performance. However, a common approach to these issues has not been developed so far. Some previous studies have examined the relationships between these processes but these studies have a fragmentary nature, limited to the relationships only between two processes. It is also important to provide recommendations for Polish SMEs, which have not been completely investigated in this field. Employee empowerment, innovativeness and internationalization are perceived as sources of competitive advantage in SMEs. Because they intertwine and interconnect in a network of feedback relationships, the need of analyzing them seems to be reasonable. Our work combines previous work in this field and innovatory, complex approach to investigate relationships between employee empowerment, innovativeness, internationalization and firm performance in the context of IT capability. We
decided to develop our theoretical research, presented in the previous sections, and conduct empirical research.

Taking into consideration IT’s increasing sophistication and usage, we expect that

**Hypothesis 1:** IT capability is positively related to employee empowerment, innovativeness and internationalization.

Previous studies suggest that IT capability not only has a direct impact on various resources and capabilities, but it also modifies relationships between them. In particular IT capability can be used to strengthen these relationships. Thus, we state an aggregated hypothesis,

**Hypothesis 2:** IT capability has a moderating effect on the relationship between employee empowerment, innovativeness, internationalization and firm performance of SMEs.

The hypothesis 2 consists of following detailed hypotheses,

**Hypothesis 2a:** IT capability has a moderating effect on the relationship between empowerment and firm performance of SMEs.

**Hypothesis 2b:** IT capability has a moderating effect on the relationship between innovativeness and firm performance of SMEs.

**Hypothesis 2c:** IT capability has a moderating effect on the relationship between internationalization and firm performance of SMEs.

Literature presents mainly results of studies for bilateral relationships, for example between empowerment and firm performance or between innovativeness and firm performance. But it is known that strength of influencing each resource and capability may change depending on the impact of other resources or capabilities. Thus, we predict that

**Hypothesis 3:** Empowerment, innovativeness, internationalization and IT capability have an effect (separately and together) on firm performance of SMEs.

The hypothesis 3 consists of following detailed hypotheses

**Hypothesis 3a:** Empowerment has an effect on firm performance of SMEs.

**Hypothesis 3b:** Innovativeness has an effect on firm performance of SMEs.
Hypothesis 3c: Internationalization has an effect on firm performance of SMEs.
Hypothesis 3d: IT capability has an effect on firm performance of SMEs.
Hypothesis 3e: Result of the total effect of all processes on firm performance is not the sum of results of the effect of each of the process separately on performance.

Realizing that SMEs are not a homogeneous set of firms and caring about reliability of our research, we decided to state hypothesis

Hypothesis 4: Control variables (for example industry, size, age) have an effect on the examined relationships.

The stated hypotheses implicate a following conceptual model (Figure 1).

**Figure 1**

**Conceptual model**

Our conceptual model fulfills the identified gap and extends previous studies including: employee empowerment, innovativeness and internationalization, placing them in the context of IT capability.

**Conclusions and further research**

Investigations of Polish SMEs have so far been few and fragmentary. In the next stage of our study, an empirical research will fill in this research gap. The research sample is restricted to SMEs that are members of the Regional Chamber of Commerce in Katowice
(RIG). RIG is one of the biggest economic organizations in Polish local governments and gathers about 400 member enterprises. The analysis of the collected data by means of quantitative methods will enable the testing of the stated hypotheses.

We think our survey instrument will be used in economic practice. Moreover, we would like to formulate some recommendations for SME leaders which help to improve organizational effectiveness. Apart from utilitarian purposes, it is important to accomplish theoretical purposes. We assumed five main theoretical purposes:

− Operationalization, in regard to SMEs, of multidimensional concepts: employee empowerment, innovativeness, internationalization.

− Determining interrelationships between employee empowerment, innovativeness, internationalization and performance of SMEs, placing them in the context of IT capability.

− Determining the effect of control variables (for example industry, size, age) on the relationships.

− Determining the effect of IT capability on employee empowerment, innovativeness, internationalization and the effect of IT capability on relationships between these processes.

− Determining the character of the effect (direct or indirect) of the individual processes on performance of SMEs.

We plan to compare our achieved results with results of similar studies conducted in other countries and identify reasons of potential differences.
References


Teaching Case Exchange Workshop: Integrating Cultural, Social, and Economic Contexts into Writing Teaching Cases

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This workshop presents a case writing model integrating American and European perspectives. The workshop highlights the key approaches to be taken when writing case studies and how they can be used to maximize the learning experience for students. A unique aspect of this workshop is its focus specifically on the relevance of 'cultural context' in writing and teaching with cases in entrepreneurship. The workshop is designed to assist entrepreneurship educators in producing entrepreneurship case studies using ‘best practice’ techniques and highlight the elements that are required to make case studies as effective and interesting as possible for teaching purposes.

Keywords: Case Writing, Entrepreneurship, Cultural Context
The Marriage Tax: Do Marriage and Children Impact the Success of Self-Employed Men and Women Differently?

Anna Flaig and Maria I. Marshall

Abstract

This study focuses on women entrepreneurs’ underperformance, specifically addressing the question of whether the presence of children and a spouse impact self-employed men and women’s wages differently. The basic proposition is that marriage and children pose a different set of challenges to men and women entrepreneurs. By acknowledging the overlap of gender, family, and business we are able to observe how the institution of marriage as well as the presence of children impacts women’s self-employment wages differently from men’s. For the overall self-employed population, marriage and children both served as a positive influence on hourly wages. However, when observing the interaction of women and children as well as women and marriage on wage, both overlaps seem to have a negative impact on wage.

Introduction

Women’s role in society has evolved over the last 50 years as the paradigm of cultural norm has shifted to allow women to have both, a career and a family. Despite this societal freedom, women entrepreneurs consistently underperform in terms of gross receipts in comparison to their male counterparts. However, research is inconclusive on the economic cause for the underperformance of women-owned businesses.

The Female Underperformance Hypothesis is defined by Du Rietz and Henrekson (2000) as: “all else equal, female entrepreneurs tend to be less successful than their male counterparts in terms of conventional economic measures” (Du Rietz and Henrekson, 2000, p.1). Using aggregate level data, a number of studies (Fischer, 1992; Brush, 1992; Rosa, Carter and Hamilton, 1996; Du Rietz and Henrekson, 2000) have confirmed that there is significant

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underperformance by women relative to men, thus supporting the female underperformance hypothesis. Using the framework of conventional economic measures, Brush (1992) found that women in the US underperform in terms of production, employment, profitability, and other performance measures, and Rosa, Carter and Hamilton (1996) found similar results for women in the UK.

However, when data is disaggregated with regard to industry and business size, the results are inconclusive as the income gap between men and women owned ventures is insignificant (Collins-Dodd, Gordon and Smart, 2004; Orser et al., 2006). Using the traditional economic measures of profit, Du Rietz and Henrekson (2000) found that gender was only a significant determinant of performance when reviewing sales.

Compared to men owned enterprises, women owned enterprises are smaller and significantly more concentrated in highly competitive industries with limited growth opportunities such as professional and business services, educational and health services, and wholesale trade and retail trade (Gurley-Calvez, Harper and Biehl, 2009; Coleman, 2007; Fasci and Valdez, 1998; Rosa, Carter and Hamilton, 1996). The heavily female dominated retail and service sectors also fall at the end of the value chain, leaving little room for the capture of additional revenue (Brush and Chaganati, 1999). This industry selection may explain a portion of female underperformance. The target customer base may also be less profitable for women owned firms than for men owned firms. Women owned firms are less export oriented and disproportionately reliant on households as customers (Du Rietz and Henrekson, 2000) and are less likely to pursue government funded contracts (DeMartino et al., 2006; Bates, 2002; Loscocco and Robinson, 1991).
Women have been found to be less risk tolerant than men (Sexton and Bowman, 1986, 1990). But these results are also inconclusive. Masters and Meier, (1988) found no significant difference between gender’s risk tolerance, where as Jianakoplos and Bernasek (1998) found that single women were more risk averse than men, and that as wealth grows men had a proportionately riskier investment portfolio than women.

Men and women also perceive and pursue capital differently (Carter and Rosa, 1998; Verheul and Thurik, 2001). A study of Norwegian entrepreneurs found that women obtain significantly less financial capital to develop their new businesses and those lower levels resulted in much slower early business growth (Alsos et al., 2006). This funding gap hinders overall business growth for women owned firms (Brush et al., 2004).

The ability to attain early business growth is a function of access to financial capital, but women business owners are less inclined to take out loans from conventional banks (Marlow, 1997). Women have also been found to make less money than men, leaving them less flexibility to invest in themselves (Marlow, 2002; Marlow and Patton, 2005). On the other hand, women may deliberately choose not to grow their businesses and pursue other goals (Sexton and Bowman, 1986; Rosa, Carter, and Hamilton, 1996).

Proposing a model of entrepreneurship, Davidsson (1991) looks to the entrepreneurs themselves, and views small business growth over time as the product of ability, need, and opportunity. Research conducted on gender differences pertaining to opportunity identification found that although men and women utilize different opportunity identification sequences, there is no measurable difference in the innovativeness of the identified opportunity (DeTienne and Chandler, 2007).
Chell and Baines (1998) attack the question of women entrepreneurship from a different angle, proposing that performance itself is gendered. They question whether the traditional profit-based measures should be the sole evaluation of performance or whether performance can be redefined by women’s own subjective standards of success. This line of thought is echoed in the family business literature as survey methods have moved beyond objective economic measures to capture subjective non-economic measures of perceived success such as owner satisfaction, customer satisfaction, personal development, and personal achievement (Rosenblatt et al., 1985; Danes & Olson, 2003; Philbrick and Fitzgerald, 2007; Clark and Marshall, 2010).

One of the key factors in identifying the differences between male and female entrepreneurs is the original motivation for entering the business. Many researchers have looked at how gender impacts business motivations, goals, and growth patterns. Men are more likely to go into business for themselves because they desire to be an entrepreneur (Scherer, Brodzinski, and Wiebe, 1990) or not work for someone else (Swayne and Tucker, 1973). Women, on the other hand, desire self-employment as it allows them to balance their work and family life (Scott, 1986; Chaganti, 1986; Kaplan, 1988; Holmquist and Sundin, 1988; Brush, 1992; Du Reitz and Henrekson, 2000). Bird and Brush (2002) characterized men as linear, rational, and strategic entrepreneurs with their main goal being wealth maximization, whereas women entrepreneurs were characterized as less sequential with family and personal life obligations playing a pivotal role.

The “Integrated Perspective” proposes that women’s social inclinations are more focused on relationships, suggesting that women perceive their businesses as part of an interconnected network of relationships—not a separate economic entity (Bird & Brush, 2002; Brush, 1992; Geoffe and Scase, 1983; Kent, Sexton and Vesper, 1982). Clark and Marshall (2010) found a
similar relationship bias with empirical data two decades later. Women entrepreneurs are more inclined to spend more time with each customer and measure success as a function of repeat customers and customer satisfaction (Clark and Marshall, 2010).

Schwartz (1976) portrayed women as the limited family oriented entrepreneur, lacking work experience and education. Nearly two decades later, Buttner and Moore (1997) put forth two female entrepreneur typologies; neither of which portrayed the entrepreneur as a housewife. They suggest two types: the Intentional Entrepreneurs, who portray similar characteristics as men and were motivated by achievement, independence, and self-actualization (DeMartino et al., 2006; Buttner and Moore, 1997; Schein, 1993) and the Career Climbers, who were driven to entrepreneurship by environmental factors or discrimination in the corporate world (DeMartino et al., 2006; Buttner and Moore, 1997; Fischer et al., 1993).

The discrimination and environmental factors found in the corporate world have also been referenced in family business literature. Several articles cite the “invisible women” phenomenon- where gender specified family roles unconsciously translate into the business (Danes and Olson, 2003). Female typologies often label the female component of the family business as: mom, spouse, care taker, negotiator, sounding board, or book keeper- roles that are often unpaid and ambiguous in nature and appreciation (Danes and Olson, 2003).

The literature in feminist economics, family business, and entrepreneurship frequently suggest that women experience some level of discrimination and subsequently lower wages in the work force, regardless of the sector or location of the job. Some of the characteristics and experiences described above are fundamental components of being a woman, but the gender roles themselves are artificial constructs foisted upon women by society. Is it possible to be a woman, a mother, and a wife and still run a successful business? Despite the fact that there is
rich body of literature pertaining to the gender question, there has been limited research on the specific overlap between women owned businesses and the presence of family, and how those factors impact women’s self employment revenues.

**Theoretical Framework**

Family business theory revolves around the concept that the family and the business are dual systems, interconnected in terms of financial and human capital. Although this study is not specifically looking at family businesses, it must be acknowledged that the family has a significant impact on entrepreneurs and their subsequent business success. The relationship between the family and the business venture is vital as the initial capital generally comes from personal and/or family assets (Dyer and Handler, 1994).

Women are known to play a number of roles: the woman, the business owner, the mother, and the wife. All of these roles and associated responsibilities overlap as women “switch hats” to stay in character. Using the “Integrated Perspective” suggesting that women perceive their businesses as part of an interconnected network of relationships (Kent, Sexton and Vesper, 1982; Bird & Brush, 2002), we propose a Women’s Business Model as shown in Figure 1 to capture the overlap between the roles of gender, family, and business.

The Women’s Business Model is a combination of the Venn diagram model proposed by Davis and Tagiui (1989) and the Sustainable Family Business Model proposed by Stafford, Duncan, Dane, and Winter (1999). Both models are rooted in the paradigm of family functionality and the paradigm of business success and, importantly, the overlap resulting from alliance with both. Our model introduces the idea of the woman as a separate entity with her own goals and success outcomes. She overlaps with the family and the business each of which have
their own goals and success outcomes. The level of success of all three entities will depend on how well the goals of the woman, the family, and the business are interconnect and integrated.

There is limited research on how the presence of a spouse and children specifically impacts women’s self-employment wages. By acknowledging the overlap of gender, family, and business we are able to observe how the institution of marriage as well as the presence of children impacts women’s self-employment wages differently from men’s. We propose that having a family may have a negative impact on women, as women are working while typically still managing the household, and that multitasking between a business and family may explain some of women’s underperformance.

**Marriage**

Women’s choice to enter into self-employment is a frequently cited choice for its flexibility, allowing women to choose how to allocate their time between their work and their family (DeMartino et al., 2006; DeMartino and Barbato, 2003; Parasuramen et al., 1996; Brush 1992, 1990; Birley 1989; Scott 1986; Darian, 1975). Hundley (2000) has even gone as far to say that to marry and have children is a conscious decision to devote time to the household, decreasing ones earning potential in the wage and salary sector. Women may therefore be motivated to enter into self-employment to avoid lower returns for their work effort in a more structured wage and salary sector (Hundley, 2000; Gurley-Calvez, Harper, and Biehl, 2009). This leads us to the following hypothesis:

*H1: Being a woman has a negative impact on business success.*

The inherent economic bonds of marriage obligate the spouse to the business. Therefore, if a spouse’s goals differ from those of the primary business owner then destructive conflicts may arise. Irrelevant of the spouses’ direct involvement in the business, their attitudes and
support have tremendous influence on the entrepreneur’s attitudes, resources, and motivations toward the business (Poza and Messer, 2001). Spouses can also be more than psychological support- having a self-employed husband was cited as one of the greatest lenders of experience and confidence to a wife, motivating their original decision to enter into self-employment (Caputo and Dolinsky, 1998).

Werbel and Roberg (1989) identify a potential person-role conflict in career choice identification. They propose that person-role conflicts may arise when the family decision maker chooses a career change that does not align with a family member (the spouse’s) preferences and perspectives of the family unit. The spouse is also a stakeholder in the family and has the power to convey perceptions and expectations. Van Auken and Werbel (2006) hypothesize that the person-role conflict is inversely associated with spousal commitment to the business and that the greater the spousal involvement in the initial decision to start the business, the greater the spousal commitment to the business. They find that spouses who are psychologically committed to the business are key assets in overcoming start-up difficulties and that spouses who are not committed increase stress by creating both family and work related conflicts (Van Auken and Werbel 2006).

Although marriage overall is assumed to have a positive impact on self-employment revenues, we hypothesize that the husband captures the majority of the benefits from this relationship. Despite the combination of human and financial capital resulting from marriage, there are related time and responsibility constraints associated with the gender role of the wife. This reasoning on marriage and its affect on business success lead us to the following hypotheses:

*H2: Marriage has a positive impact on business success.*
H3: Married women will earn less than married men.

Children

Several researchers have found that the presence of children as well as marriage increases women’s likelihood of entering into self-employment (Caputo and Dolinsky, 1998; Connelly, 1992; Robinson and Sexton, 1994). Female and male entrepreneurs integrate their personal or family lives and their career lives differently (Parasuraman et al., 1996). In particular, children can pose a different set of challenges for men and women. There are still stereotypes and intrinsic motivations in place that impact childcare activities and responsibilities, and those responsibilities still tend to fall primarily on women. For men, children have been found to represent a source of motivation, but for women children represented a source of distraction and a supervision issue (Williams, 2004). This may imply that women are multi-tasking, working while supervising their children, whereas men compartmentalize their work and family life.

Women work fewer hours a week and have less time to devote to their business when compared to their male counterparts (Parasuraman et al., 1996; Gurley-Calvez, Harper and Biehl, 2009). Using the American Time Use Survey, Gurley-Calvez, Harper, and Biehl (2009) found that women spend less time on work and work-related activities than men, and self-employed women spend less time on work-related activities than wage and salary women. They also found that each additional child leads to 2.4 fewer work hours a week for self-employed women and 1.5 fewer hours for wage and salary women compared to men (Gurley-Calvez, Harper, and Biehl, 2009). This leads us the following hypothesis:

H4: Children have a negative impact on women’s business success.

The age of the child also has bearing on the amount of time required in terms of supervision. Children under the age of five are not yet eligible for the state funded education
system making them either a financial or time constraint on the parents as they seek alternative means of supervision. The greater the cost of childcare relative to wage potential the less likely one is to seek employment. People often enter self-employment to overcome child care costs because self-employment provides flexibility for time management (Caputo and Dolinsky, 1998). This reasoning leads us to the following hypothesis:

\textit{H5: Children under the age of five have a negative impact on women’s business success.}

The concept that women are disadvantaged in terms of earning power is not a new idea. These five hypotheses have been tested in isolation to some extent in the gender, entrepreneurship, and family business literature. However, the results have been inconclusive as they have not addressed the specific overlap of marital status and presence of children on women’s self-employment wages. Building on the gender, children, and marriage related hypotheses we study the self-employment wage differences between married and single, men and women.

Other Factors

The small business, family business, and entrepreneurship literature provide empirical support that experience positively impacts business profitability. Human capital theory attempts to explain how these individual endowments, coupled with the environment can shape different earning outcomes. Becker (1993) defines human capital as stocks of skill, knowledge, intelligence, and health that could be used to generate both monetary and non-monetary resources. When looking at human capital factors that influence the entrance into self employment, industry specific experience (Loscocco and Robinson, 1991) and a self-employed spouse (Caputo and Dolinsky, 1998) were major determinants of women entering into self-employment. However, age and children over the age of 18 had a negative and significant impact
on the duration of self-employment in Europe (Williams, 2004). Brush and Chaganti (1999) found that a combination of education level and industry specific experience had a significant impact on firm performance- as measured by net cash flows and employment levels.

Education has also been found to have a positive impact on business performance, duration, and success. Bates (1990) found that entrepreneurs with a college education were dramatically less likely to fail than those without a college education. College education also provides entrepreneurs with greater access to loans from commercial banks (Bates, 1990). Education improves firm survival and firm growth. Individuals with higher levels of education exhibit decreased probability of business exit during difficult economic times (Cooper, Gimeno-Gascon, and Woo, 1994). The type of education can also have an impact on time use. Gurley-Calvez, Harper, and Biehl (2009) found that women on average spend more time in child care than work activities. However, self-employed women with professional degrees spend much more time in work activities- indicating that some women might be more career oriented.

**Empirical Analysis**

**Data**

This study uses a sample of self-employed people from the 2007 American Community Survey (ACS) extracted from the Integrated Public Use Micrordata Series (IPUMS) data base of the Minnesota Population Center. We used both incorporated and unincorporated self-employed businesses owned by both men and women. The IPUMS is composed of microdata and the unit of observation is the individual, but the data is also organized into households. The household data allow the study of individual characteristics within the context of their family. The sample of self-employed individuals includes 179,808 observations. The data are then divided into four subsets: married women (43,159), single women (20,178), married men (86,108), and single men
(30,363). For this study the definition of “married” includes married persons whose spouses are present and absent in the household and “single” includes persons who are single, divorced, separated, or widowed.

**Dependant Variables**

The dependent variable is the wage earned from the self-employment venture. Table 1 shows the definitions and summary statistics of the variable in the study. As the self-employed do not earn a fixed hourly wage, this variable is constructed from their reported income earned from their business \((\text{inearn})\) divided by the usual hours worked on a yearly basis. This constructed wage variable \((\text{wage})\) allows us to measure the efficiency of income generated for actual hours worked rather than looking at their total income.

On average, the population works 40.28 hours a week with single men falling slightly above that per week at 40.53 hours and married men working more at 44.66 hours. Women on the other hand fall short of the average, with single women working 34.77 hours and married women working 33.94 hours. The amount of time spent working has a direct relationship with income earned. The average income earned is $54,285.41 for the entire sample. Married men by far exceed this amount with an average income earned of $72,809.13 followed by single men with earnings of $45,362.93. These numbers support the idea in previous research that marriage and potentially children provide a source of motivation for men to work harder to provide for their family. Women on the other hand do not experience nearly as marked a marital status gap in income earned, with married women making $34,053.06 compared to single women making $31,938.35.

Women make less money and work fewer hours than men. However, when looking at the combination of income earned and hours worked to the hourly wage variable we can see how
efficient these different groups are at converting their work time into revenue. The population average is $40.84 per hour for roughly 40 hours a week. Married men exceed this with $46.11 per hour but they also work 44.66 hours a week. Single men fall short at $37.60, while still working 40 hours a week. Using the difference of means test, the difference between married and single men’s wages is statistically significant at 1 percent level. Women on the other hand work fewer hours and make less money, but the hourly wage allows for a more accurate comparison. Single women work roughly 35 hours a week and make $39.18 per hour versus married women who work roughly 34 hours a week and make $33.41 per hour. Using the difference of means test, the difference between married and single women’s wages is statistically significant at 5 percent level. However, the most significant difference in wages is the approximate $13 difference in wages between married men and married women; the difference is statistically significant at the 1 percent level. Single men and women make nearly the same, with single women making slightly more than men. However, that difference was not statistically significant.

**Independent Variables**

Table 1 also shows the independent variables of interest in this study: marriage and the interaction between gender, marriage, and children. Overall, the sample is comprised of 35.22 percent women, 64.78 percent men, and 71.89 percent married individuals. An important component of this study is the presence of children in the household and the presence of children under the age of five. As stated in the literature, children pose a different set of challenges and opportunities to men and women. By separating children into two groups we can observe how the younger group, who should theoretically take up more time and energy in supervision related activities, impacts the respondents. Of the sample, 43.66 percent have children. When looking
specifically at younger children, 10.63 percent of the sample has at least one child under the age of five. The variable \textit{nchild} represents the number of children in the household. The variable \textit{nchild5} is a binary variable indicating whether there are children under the age of five in the household coded one, or not coded zero.

To further understand the intersection of gender, marital status, and children on self-employment wages we created interaction terms: married women (\textit{WM}), women with children (\textit{WC}), married with children (\textit{MC}), married women with children (\textit{WMC}), and women with children under five years old (\textit{WC5}). These interactions are a meaningful contribution to the literature and allow us to understand the overlap between the woman, the mother, and the wife represented in the Women’s Business Model.

Household disruptions like separation, divorce, or death cause a shock to the family unit which can translate to disruptions in the working of the business. Despite the fact that we do not have the time frame of the relationship shock, we model its occurrence to see how the absence of a spouse in the household impacts wages. The binary variable modeling relationship tension (\textit{RelationshipTen}) is coded “one” to indicate whether the primary respondent is separated, divorced, widowed or married, spouse absent and coded “zero” if the primary respondent is married spouse present or single.

\textbf{Control Variables}

Control variables are demographic, human and financial capital, industry, and geographic variables. Descriptive statistics are shown in Table 2. The demographic variables include age and race. The human and financial capital variables are level of educational attainment, incorporation of the business, and home ownership. Owning a home is used as a proxy for access to financial
capital. There are 11 industry variables included and they are used to control for industry related effects. To observe geographic trends five geographic variables are included.

**Empirical Models**

Traditionally, the literature looks at female underperformance in the context of all self-employed individuals. For this analysis we are only interested in the people who are actively venturing into self-employment endeavors. Therefore, we limited our sample to individuals who work at least 20 hours a week and 20 weeks a year. This focuses our model only on individuals who are working at least part-time in their business. Moreover, we include interaction terms of family dynamics so that we can determine their impact on married and single individuals.

We model the wage variable, $Y$, as a linear function of the predictor variables, $X$. The matrix $X$ includes the variables of independent variables which include the interaction variables and the control variables. To analyze the impacts of family as well as personal and industry characteristics on self employment wages we utilize an ordinary least squares (OLS) regression. We utilize three different of models. The first model tests the first hypothesis and the direct effects of gender, marital status, the presence of children and children under five. Model expresses self employment wage as a function of family and marriage variables while controlling for the effects of all business-specific variables, personal attributes, and geographic variables.

The subsequent models also include important interaction terms that quantify the overlap of the different dimensions of gender and family variables. The second model introduces interaction terms between women and marriage ($WM$), women and children ($WC$), and children and marriage ($CM$). The third model introduces an additional interaction term to account for the possible joint effect of women, marriage, and children ($WMC$).

**Results and Discussion**
Model 1

The regression coefficients, standard errors, and model fit are shown in Table 3. Our first hypothesis (H1), that being a woman had a negative impact on wages, was supported. We expected the coefficient to be negative and statistically significant as has been shown previously in the literature and it was negative and statistically significant at the one percent level. This finding indicates that all else held equal, being a women reduces hourly wage by $8.61 an hour. Translating this into annual income, assuming someone works 35 hours a week and 50 weeks a year this results in a potential $15,067.50 income differential between men and women.

Our hypothesis, that marriage has a positive impact on wages (H2), was supported. Marriage was positive and statistically significant at the one percent level. This indicates that someone who is married and works an average of 35 hours a week and 50 weeks a year will make $2,625 more than someone who is single. This result has a number of interesting implications. The literature has shown that marriage can be a source of support (Caputo and Dolinsky, 1998) as well as a potential source of conflict, depending on goals (Poza and Messer, 2001; Van Auken and Werbel, 2006).

Similar to marriage, children had a positive impact on wage. Our hypotheses H4 and H5 were not supported. Having children was positive and statistically significant at the one percent level and having children less than five years old was not statistically significant. We hypothesized that having children would have a negative impact on wage. However, the results support the suggestion by Williams (2004) that children are perhaps a source of motivation for the self-employed.

The demographic variables (race, age, and education) were all statistically significant. Compared to their white counterparts other racial groups such as blacks make less per hour all
else help equal. Age and education were statistically significant. Age was statistically significant at the one percent level. To interpret the age coefficients we use the equation: absolute value $|B1/(2*B2)|$, which indicates the point of diminishing returns to age. In this base model, diminishing returns to age occur at approximately 54 years. The reference education variable is a high school degree or less. Not surprisingly higher levels of education increase hourly wage. For example a Bachelors degree increases wage by $9.64 an hour and a Masters degree increases wage by $13.23 compared to having a high school education.

The business control variables were also statistically significant. The coefficients on incorporation and owning a home were positive and statistically significant at the one percent level. Agriculture, art, construction, and other services were negative and statistically significant at the one percent level. Mining, whole sale trade, education and health, and finance/real estate had positive coefficients and were also statistically significant at the one percent level. For the industry variables the reference was retail trade.

Using the North East as a reference variable, the geographic variables South, Mid West, and West were negative and the Pacific West was positive. All the geographic variables were statistically significant at the one percent level.

**Models 2 and 3**

In the second model we include the interaction between gender and family to determine their impact on wage. The second model includes the interaction terms $WC$, $WM$, $CM$, and $WC5$. The regression coefficients, standard errors, and model fit are shown in Table 3. Gender has a negative impact on wages and is statistically significant at the one percent level (H1 supported). However, by including the interaction terms the magnitude of the gender coefficient decreased.
This decrease in the negative impacts of gender indicates that the family interaction variables are controlling for some of the wage impacts previously captured by the gender variable.

The interaction terms show an interesting trend in terms of children’s impact on women. The coefficient on $WC$ was negative and statistically significant at the one percent level. This result indicates that although children can have an overall positive impact on self-employment wages, they have a less positive impact on wages for women compared to men (H4 supported). This suggests that children do possibly represent a distraction for women and indicates a need to balance work and family. However, the interaction coefficient on $WC5$ is positive and statistically significant at the five percent level (H5 not supported). We expected to see that children under the age of five had a negative impact on wages based on the assumption that they required more time. The results indicate that children under the age of five actually serve as a positive influence for women. This highlights very interesting implications for the presence and impacts of young children.

Marriage also had a positive impact on wages in this model. The interaction terms included in this model have the capacity to determine the impact of being female and married on wage. Interestingly, the interaction term ($WM$) is negative and statistically significant at the one percent level (H3 supported). The $WM$ variable indicates that the potential benefits of marriage accrue to men. The direct result is that married women earn $6.27 per hour less than men. This is perhaps the most interesting finding in this article. We think that is may be a result of the household related time constraints associated with being married, and that women are actually balancing a self-employment venture as well as managing the household. This may also indicate that husbands are actually collecting rent from their wives. Or perhaps, that married women are subject to a “marriage tax”. In addition, women are often motivated to enter into self-
employment as a mechanism to balance their work and family lives, marriage may be an accepted profit constraint for women and provides an opportunity for a less profit-oriented lifestyle.

The third model built upon the two preceding models. The regression coefficients, standard errors, and model fit are also shown in Table 3. The addition to this model was the triple interaction term of $WCM$ which was not statistically insignificant coefficient.

**Conclusion**

This study focuses on women entrepreneurs’ underperformance, specifically addressing the question of whether the presence of children and a spouse impact self-employed men and women’s wages differently. It makes two specific contributions to research focusing on the overlap between gender, entrepreneurship, and family. First, it shows the significantly negative impact that marriage plays on women entrepreneurs posing an alternative theory for the cause of women underperformance. Second, it provides insight into how children and family impact male and female entrepreneurs differently.

By utilizing the interaction terms that represent the overlap of gender and family we are able to observe the impact of marriage on entrepreneurs as a whole as well as specifically on female entrepreneurs. With the interaction between women and marriage we observe a consistently negative impact, contrary to the consistently positive marriage impact for men. This indicates that marriage has an opposite impact on men and women who are engaged in self-employment ventures. This may also indicate that husbands are actually collecting rent from their wives. Or perhaps, that married women are subject to a “marriage tax”. This study poses an alternate reason for female underperformance, stressing that marital status can be considered more than just a demographic variable.
References


Table One

Descriptive Statistics for Dependant and Independent Family Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Married</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>N=43,159</td>
<td>N=20,178</td>
<td>N=86,108</td>
<td>N=30,363</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total income ($)</td>
<td>34,053.06 (56,791.00)</td>
<td>31,938.35 (53,877.99)</td>
<td>72,809.13 (96,742.36)</td>
</tr>
<tr>
<td>Self-reported hours worked per week</td>
<td>33.94 (17.59)</td>
<td>34.77 (17.78)</td>
<td>44.66 (16.41)</td>
</tr>
<tr>
<td>Wage ($ per hour)</td>
<td>33.41 (215.78)</td>
<td>39.18 (547.77)</td>
<td>46.11 (249.92)</td>
</tr>
</tbody>
</table>

Independent Family Variables

<table>
<thead>
<tr>
<th>Number of children</th>
<th>1.06 (1.22)</th>
<th>0.49 (0.90)</th>
<th>0.49 (0.90)</th>
<th>0.19 (0.57)</th>
<th>0.84 (1.17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Married</td>
<td>100</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>71.89</td>
</tr>
<tr>
<td>Have children &lt; 5 yrs old</td>
<td>14.24</td>
<td>4.45</td>
<td>13.23</td>
<td>2.25</td>
<td>10.63</td>
</tr>
<tr>
<td>Divorced</td>
<td>-</td>
<td>40.23</td>
<td>-</td>
<td>38.01</td>
<td>10.93</td>
</tr>
<tr>
<td>Separated</td>
<td>-</td>
<td>6.79</td>
<td>-</td>
<td>5.41</td>
<td>1.68</td>
</tr>
<tr>
<td>Widowed</td>
<td>-</td>
<td>14.33</td>
<td>-</td>
<td>5.41</td>
<td>2.52</td>
</tr>
<tr>
<td>Married, spouse absent</td>
<td>2.51</td>
<td>-</td>
<td>2.41</td>
<td>-</td>
<td>1.76</td>
</tr>
</tbody>
</table>

* Difference of means test was statistically significant at 10% level: single women make more than married women.
* Difference of means tests were statistically significant at 1% level: married men make more than married women and more than single men.
* Difference of means tests were statistically significant at 5% level: married men make more than single women.
## Table 2
### Descriptive Statistics for Control Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Total Population (n=179,808)</th>
<th>Subsample: Women (n=43,159)</th>
<th>Subsample: Men (n=130,649)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Married (n=20,178)</td>
<td>Not Married (n=86,108)</td>
<td>Married (n=30,363)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mean (SD)</td>
<td>mean (SD)</td>
<td>mean (SD)</td>
</tr>
<tr>
<td>Demographic Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Age (years)</td>
<td>48.92 (11.45)</td>
<td>46.95 (15.85)</td>
<td>51.38 (12.27)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Variables</td>
<td>freq (%)</td>
<td>freq (%)</td>
<td>freq (%)</td>
<td>freq (%)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White White: 1=yes, 0=no</td>
<td>(86.41)</td>
<td>37390 (86.63)</td>
<td>16311 (80.84)</td>
<td>76086 (88.36)</td>
</tr>
<tr>
<td>Black   Black: 1=yes, 0=no</td>
<td>7733 (4.30)</td>
<td>1325 (3.07)</td>
<td>155 (0.77)</td>
<td>2045 (6.74)</td>
</tr>
<tr>
<td>Native American Native American: 1=yes, 0=no</td>
<td>10132 (0.57)</td>
<td>234 (0.54)</td>
<td>155 (0.77)</td>
<td>2045 (6.74)</td>
</tr>
<tr>
<td>Chinese Chinese: 1=yes, 0=no</td>
<td>1760 (0.98)</td>
<td>581 (3.15)</td>
<td>168 (0.83)</td>
<td>840 (0.98)</td>
</tr>
<tr>
<td>Japanese Japanese: 1=yes, 0=no</td>
<td>556 (0.31)</td>
<td>157 (0.36)</td>
<td>90 (0.45)</td>
<td>221 (0.26)</td>
</tr>
<tr>
<td>Asian/Pacific Islander Asian/Pacific Islander: 1=yes, 0=no</td>
<td>5394 (3.00)</td>
<td>1670 (3.87)</td>
<td>508 (2.52)</td>
<td>2664 (3.09)</td>
</tr>
<tr>
<td>Multiple Race 2+ Races: 1=yes, 0=no</td>
<td>7960 (4.43)</td>
<td>1802 (4.18)</td>
<td>1256 (6.22)</td>
<td>3244 (3.77)</td>
</tr>
<tr>
<td>Hispanic Hispanic Ethnicity: 1=yes, 0=no</td>
<td>15198 (8.45)</td>
<td>3576 (8.29)</td>
<td>2356 (6.22)</td>
<td>6429 (7.47)</td>
</tr>
<tr>
<td>Human/Financial Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSLess HS degree or less: 1=yes, 0=no</td>
<td>67905 (37.77)</td>
<td>14218 (32.94)</td>
<td>7611 (37.72)</td>
<td>32325 (37.54)</td>
</tr>
<tr>
<td>SmColl Some College: 1=yes, 0=no</td>
<td>50518 (28.10)</td>
<td>13545 (31.38)</td>
<td>6278 (31.11)</td>
<td>22378 (25.99)</td>
</tr>
<tr>
<td>Bach Bachelors Degree: 1=yes, 0=no</td>
<td>12189 (6.78)</td>
<td>9436 (21.86)</td>
<td>3697 (18.32)</td>
<td>2664 (3.09)</td>
</tr>
<tr>
<td>Mast Masters Degree: 1=yes, 0=no</td>
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<td>9436 (21.86)</td>
<td>3697 (18.32)</td>
<td>2664 (3.09)</td>
</tr>
<tr>
<td>Prof Professional Degree: 1=yes, 0=no</td>
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<td>9436 (21.86)</td>
<td>3697 (18.32)</td>
<td>2664 (3.09)</td>
</tr>
<tr>
<td>Doct Doctorate Degree: 1=yes, 0=no</td>
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<td>9436 (21.86)</td>
<td>3697 (18.32)</td>
<td>2664 (3.09)</td>
</tr>
<tr>
<td>Incorp Business Incorporation: 1=yes, 0=no</td>
<td>61396 (34.15)</td>
<td>13340 (30.91)</td>
<td>4440 (22.00)</td>
<td>35227 (40.91)</td>
</tr>
<tr>
<td>OwnHome Own Home: 1=yes, 0=no</td>
<td>6049 (34.15)</td>
<td>13340 (30.91)</td>
<td>4440 (22.00)</td>
<td>35227 (40.91)</td>
</tr>
<tr>
<td>Industry Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AG Agriculture: 1=yes, 0=no</td>
<td>122662 (7.04)</td>
<td>1737 (4.02)</td>
<td>467 (2.31)</td>
<td>32325 (37.54)</td>
</tr>
<tr>
<td>Mining Mining: 1=yes, 0=no</td>
<td>514 (0.29)</td>
<td>53 (0.12)</td>
<td>15 (0.07)</td>
<td>32325 (37.54)</td>
</tr>
<tr>
<td>Construction Construction: 1=yes, 0=no</td>
<td>30746 (17.10)</td>
<td>1880 (4.36)</td>
<td>468 (2.30)</td>
<td>3880 (5.42)</td>
</tr>
<tr>
<td>Manufacturing Manufacturing: 1=yes, 0=no</td>
<td>7035 (3.91)</td>
<td>1485 (3.44)</td>
<td>453 (2.25)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>WSTrade Wholesale Trade: 1=yes, 0=no</td>
<td>5121 (2.85)</td>
<td>924 (2.14)</td>
<td>303 (1.50)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Trans Transportation: 1=yes, 0=no</td>
<td>6716 (3.74)</td>
<td>586 (1.36)</td>
<td>247 (1.22)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Comm Communication: 1=yes, 0=no</td>
<td>2777 (1.43)</td>
<td>648 (1.50)</td>
<td>362 (1.99)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Finance &amp; Real Estate Finance &amp; Real Estate: 1=yes, 0=no</td>
<td>16252 (9.04)</td>
<td>4430 (10.26)</td>
<td>1969 (9.76)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>EduHealth Education &amp; Health Services: 1=yes, 0=no</td>
<td>1711 (9.91)</td>
<td>7667 (17.76)</td>
<td>3860 (19.13)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Art Art &amp; Graphic Design: 1=yes, 0=no</td>
<td>10919 (6.07)</td>
<td>3279 (7.60)</td>
<td>1601 (7.93)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Other Serv Other Services: 1=yes, 0=no</td>
<td>19225 (10.69)</td>
<td>6602 (15.51)</td>
<td>4759 (23.59)</td>
<td>1078 (1.58)</td>
</tr>
<tr>
<td>Geographic Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NE North East: 1=yes, 0=no</td>
<td>30984 (17.23)</td>
<td>6956 (16.12)</td>
<td>3521 (17.45)</td>
<td>15187 (17.64)</td>
</tr>
<tr>
<td>S South: 1=yes, 0=no</td>
<td>44277 (24.62)</td>
<td>10412 (24.12)</td>
<td>1116 (25.35)</td>
<td>21288 (24.72)</td>
</tr>
<tr>
<td>MW Midwest: 1=yes, 0=no</td>
<td>39392 (21.91)</td>
<td>9735 (22.56)</td>
<td>3581 (17.75)</td>
<td>19737 (22.92)</td>
</tr>
<tr>
<td>W Mountain West: 1=yes, 0=no</td>
<td>33630 (18.70)</td>
<td>8316 (19.27)</td>
<td>3677 (18.22)</td>
<td>16159 (18.77)</td>
</tr>
<tr>
<td>Pac Pacific West: 1=yes, 0=no</td>
<td>31525 (17.53)</td>
<td>7740 (17.93)</td>
<td>4283 (21.23)</td>
<td>13737 (15.95)</td>
</tr>
</tbody>
</table>
### Table 3
Regression Results for Models 1-3

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b (Std. Error)</td>
<td>t value</td>
<td>b (Std. Error)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.733 (0.937)</td>
<td>-1.85</td>
<td>-2.503 (0.941)</td>
</tr>
<tr>
<td><strong>Variables of Interest</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-8.610 (0.173)</td>
<td>-49.90</td>
<td>-5.419 (0.312)</td>
</tr>
<tr>
<td>Marriage</td>
<td>1.501 (0.242)</td>
<td>6.20</td>
<td>2.894 (0.276)</td>
</tr>
<tr>
<td>nchild</td>
<td>0.769 (0.075)</td>
<td>10.29</td>
<td>1.212 (0.216)</td>
</tr>
<tr>
<td>nchild5</td>
<td>0.445 (0.276)</td>
<td>1.61</td>
<td>-0.049 (0.322)</td>
</tr>
<tr>
<td><strong>Interaction Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WC</td>
<td>-0.792 (0.156)</td>
<td>-5.09</td>
<td>-1.245 (0.394)</td>
</tr>
<tr>
<td>CM</td>
<td>-0.312 (0.211)</td>
<td>-1.48</td>
<td>-0.600 (0.312)</td>
</tr>
<tr>
<td>WM</td>
<td>-3.748 (0.369)</td>
<td>-10.15</td>
<td>-3.777 (0.412)</td>
</tr>
<tr>
<td>WCS</td>
<td>1.296 (0.564)</td>
<td>2.3</td>
<td>1.282 (0.564)</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RelationshipTen</td>
<td>0.232 (0.268)</td>
<td>0.86</td>
<td>0.020 (0.271)</td>
</tr>
<tr>
<td>age</td>
<td>0.727 (0.039)</td>
<td>18.83</td>
<td>0.724 (0.039)</td>
</tr>
<tr>
<td>age2</td>
<td>-0.007 (0.000)</td>
<td>-17.58</td>
<td>-0.007 (0.000)</td>
</tr>
<tr>
<td>Black</td>
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<td>-4.107 (0.377)</td>
</tr>
<tr>
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<td>-3.370 (1.001)</td>
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<td>-3.360 (1.001)</td>
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<tr>
<td>AsianPI</td>
<td>-3.744 (0.364)</td>
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<td>-3.706 (0.364)</td>
</tr>
<tr>
<td>MultipleRace</td>
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<td>-2.28</td>
<td>-0.970 (0.420)</td>
</tr>
<tr>
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<td>-3.844 (0.317)</td>
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<td>-3.891 (0.317)</td>
</tr>
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<td>2.046 (0.187)</td>
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<td>2.040 (0.187)</td>
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<td>Masters</td>
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<td>13.154 (0.327)</td>
</tr>
<tr>
<td>Professional</td>
<td>37.480 (0.352)</td>
<td>106.60</td>
<td>37.357 (0.352)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>24.782 (0.621)</td>
<td>39.89</td>
<td>24.696 (0.621)</td>
</tr>
<tr>
<td>Incorp</td>
<td>6.721 (0.158)</td>
<td>42.58</td>
<td>6.682 (0.158)</td>
</tr>
<tr>
<td>OwnHouse</td>
<td>4.307 (0.224)</td>
<td>19.26</td>
<td>4.343 (0.224)</td>
</tr>
<tr>
<td>AG</td>
<td>-5.699 (0.322)</td>
<td>-17.70</td>
<td>-5.722 (0.322)</td>
</tr>
<tr>
<td>Mining</td>
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<td>8.22</td>
<td>11.083 (1.350)</td>
</tr>
<tr>
<td>Construction</td>
<td>-1.230 (0.238)</td>
<td>-5.18</td>
<td>-1.233 (0.238)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.200 (0.392)</td>
<td>0.51</td>
<td>0.203 (0.392)</td>
</tr>
<tr>
<td>WSTrade</td>
<td>2.995 (0.447)</td>
<td>6.70</td>
<td>2.957 (0.447)</td>
</tr>
<tr>
<td>Trans</td>
<td>0.327 (0.399)</td>
<td>0.82</td>
<td>0.307 (0.399)</td>
</tr>
<tr>
<td>Comm</td>
<td>-0.389 (0.643)</td>
<td>-0.61</td>
<td>-0.400 (0.642)</td>
</tr>
<tr>
<td>FinanceRE</td>
<td>8.724 (0.281)</td>
<td>31.05</td>
<td>8.701 (0.281)</td>
</tr>
<tr>
<td>EduHealth</td>
<td>3.154 (0.293)</td>
<td>10.78</td>
<td>3.168 (0.293)</td>
</tr>
<tr>
<td>Art</td>
<td>-4.542 (0.336)</td>
<td>-13.51</td>
<td>-4.545 (0.336)</td>
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<tr>
<td>OtherServ</td>
<td>-4.588 (0.280)</td>
<td>-16.41</td>
<td>-4.720 (0.280)</td>
</tr>
<tr>
<td>S</td>
<td>-0.762 (0.231)</td>
<td>-3.30</td>
<td>-0.756 (0.231)</td>
</tr>
<tr>
<td>MW</td>
<td>-2.743 (0.239)</td>
<td>-11.50</td>
<td>-2.697 (0.239)</td>
</tr>
<tr>
<td>W</td>
<td>-0.667 (0.247)</td>
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<td>-0.650 (0.247)</td>
</tr>
<tr>
<td>Pac</td>
<td>3.755 (0.253)</td>
<td>14.86</td>
<td>3.756 (0.253)</td>
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<tr>
<td><strong>Parameter Estimates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>0.1955</td>
<td>0.1964</td>
<td>0.1953</td>
</tr>
<tr>
<td>Adj R-Sq</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F Value</td>
<td>1052.04</td>
<td>946.83</td>
<td>922.6</td>
</tr>
</tbody>
</table>
Figure 1
Women’s Business Model

Woman

Family

Business
YOUNG RESEARCHERS WRITING WORKSHOP
At ICSB World Conference 2010

Organised by
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Creative Industries in Finland – barriers hindering entrepreneurial development

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Abstract

The purpose of this study is to expand knowledge on the internal resources and the know-how of the entrepreneur, both of which have an effect on the growth of a business. Another goal of this study is to find out how cooperation with different partners such as the public sector, businesses within one’s own industry and companies outside one’s own sector affects growth. In order to meet this goal, a structured questionnaire has been sent out to entrepreneurs in creative industries in the Northern Savo region of Finland.

The focus of today’s business life has shifted from traditional manufacturing towards industries that are relying more heavily on creativity. A new concept, creative economy, has arisen from this phenomenon, and is being used by many researchers and policy makers of today. Because of this change, creative industries are becoming more widely accepted as playing an important part in economic growth. In spite of this new role of the creative industries, there is a lack of research in this field in Finland. We have therefore come to recognize that it is vital to discuss the present state of small creative businesses and the challenges that today’s creative industry is facing.

The research presented in this paper was based on a structured questionnaire that was sent to 855 entrepreneurs operating in the creative industries in the Northern Savo region at 2009. From the 855 entrepreneurs, we received a total amount of 189 usable replies.

A logistic regression analysis was used in order to find out what are the internal resources that affect the entrepreneurs’ intentions for growth. The estimated parameters were fairly successful in explaining the entrepreneurs’ willingness to either grow or not grow their companies. Out of all of the observations made, 64.4 % were classified correctly by the logistic regression analysis. Based on the model, it is revealed that successful resources for HRM and financing have a positive effect on growth.

Cooperation is recognized as a vital factor for businesses with growth intentions. We wanted to find out who the partners that the entrepreneurs in the creative sector cooperate with are and whether the entrepreneurs feel that cooperation with such partners has an effect on growth intentions. First, the willingness to grow was cross tabulated with different partners. Second, a chi-square test was used to find out statistical significance between cooperation and growth intentions. Based on the chi-square test, we propose that cooperation with
firms outside of one’s own sector has a positive effect on growth. The chi-square test also reveals that a successful relationship and collaboration with subcontractors has an effect on entrepreneurs’ positive attitudes towards growth. The data showed that cooperation with companies within one’s own field of operation takes place fairly often, but that there is no positive correlation between this kind of activity and growth intentions.

1. Introduction

We know from previous research that entrepreneur’s growth aspiration supports actual business growth (Baum, Locke, & Smith 2001; Baum, Locke, & Kirkpatrick 1998; Kolvereid & Bullvag 1996; Miner, Smith, & Bracker 1989). However, as Wiklund and Shepherd (2003) suggest, this relationship between growth aspiration and actual growth appears to be more complex than previously indicated (Wiklund & Shepherd 2003). Even though many entrepreneurs feel that growth is the goal that one should pursue, business owners also operate their own companies for a variety of reasons other than the one of maximizing their economic profits (Davidsson 1989a; Delmar 1996; Kolvereid 1992; Storey 1994). These other reasons include non-economic personal factors such as gaining independence or developing one’s own ideas (Douglas & Shepherd 2000). In this paper, we want to take a look at entrepreneurs operating in the creative sector (to be defined later on in the paper) and their growth aspirations.

The relationship between entrepreneurship and firm performance has gained much attention from researchers in the field. This paper attempts to extend knowledge on the internal resources and the know-how of the entrepreneur, both of which have an effect on business growth. Another goal of this study is to find out how cooperation with different partners such as businesses within one’s own industry, companies outside one’s own line of business and the public sector affects growth.

As previously mentioned, Wiklund and Shepherd (2003) argue, that the relationship between growth aspiration and growth is more complex than often thought. Wiklund and Shepherd (2003) agree that the nature of the relationship depends on the level of experience of the small business manager as well as the dynamism of the environment in which they operate. Furthermore, Wiklund and Shepherd point out that education, experience and environmental dynamism magnify the effect that one’s growth aspirations have on the realization of growth. (Wiklund & Shepherd 2003). In this paper, we will examine whether this is also true in the case of the creative sector. We will also include in our study an aspect of cooperation. Like Jennings and Beaver (1997) indicated, there is a reason to believe that the growth of small businesses is a
result of the manager’s personal abilities. In order to expand one’s business, the manager must have the ability to secure the resources needed for growth as well as possess the capability to develop his or her organization (Covin & Slevin 1997; Sexton & Bowman-Upton 1991). Thus, as many previous studies have demonstrated, it would appear that one’s personal abilities play an important role in small business development.

In our study, we looked at the entrepreneur’s personal abilities such as know-how and competence as well as how his or her use of networks influences growth aspirations. We divided competence in sub-groups such as core competence, strategic competence, ability to productization and branding, and compared them to growth motivation. After this was completed, we wanted to find out just what kind of influence might possible cooperation with different partners such as businesses within one’s own industry, companies outside one’s own line of business and the public sector have on growth intentions. In order to meet these goals, a structured questionnaire was sent out to entrepreneurs in the creative sector in the Northen Savo region of Finland.

The creative industries are currently subject to wide-spread attention and interest. This sector is of growing economic importance, as the creative industries have significant market value and can be argued to contribute to individual wealth and GDP. According to the Strategy for Creative Industries 2015 by the Ministry of Trade and Industry of Finland, creative industries is also a growing business sector in Finland. However, there is a lack of knowledge of entrepreneurship in the creative industries. The majority of employment and commercial activity in the creative industries takes place within small firms. Essential obstacles for entrepreneurship in creative industries include the lack of business skills and the commitment in small home markets and in low-level networking.

Two main research questions emerge:

1. How do the entrepreneur’s personal abilities such as know-how and competence influence growth aspirations?
2. What kind of cooperation between partners enables growth?

The paper proceeds as follows. First, we will present factors facilitating firm growth as well as those hindering entrepreneurial development and growth. We will also provide an overview of the effect that
cooperation and the entrepreneur’s internal resources and competences have on growth intentions. Second, we will describe the research method by including a description of data collection and analysis utilized in the study as well as in the context of the study. Third, we will analyze the data and present results. Finally, we will discuss the findings and implications of the research as well as present the need for future research.

2. Background

2.1 Factors facilitating and hindering small business development and growth

When talking about firm growth, the first task one should perform is defining what growth is. The concept of business growth varies between parties such as academic scholars and entrepreneurs (Achtenhagen, Naldi, & Melin 2010). While scholars use measures such as sales and employment, for entrepreneurs growth can mean something else, such as increased job satisfaction or gaining independence. In this study, growth aspirations are measured by the entrepreneur’s willingness to expand his or her business in terms of sales and/or employment.

Mazzarol (2000) has pointed out that in the new millennium small businesses are being seen as motors for economic growth, generators of innovations and a solution to the unemployment that has been continuing for decades. Because of this, there has been an evident shift in the field of small businesses towards firms being clearly growth-oriented (Morrision, Breen, & Ali 2003). This has been especially evident in the decision making concerning small businesses, the subsidization of small businesses and in small business research (Bridge, O’Neill, & Cromie 1998). We argue that since there are always limited resources on subsidizing small businesses, their resources should be allocated to firms with clear growth aspirations. As a result, there is a vast interest in the field of small business research so that one would understand the factors behind small business growth (Morrison et.al. 2003). To meet the goal of this study, which is to identify the key factors hindering small business development, we argue that it is vital to first understand the factors facilitating growth and development.

In spite of the lack of a universal theory explaining small business growth (Smallbone, Leigh, & North 1995) and the fact that no such theory is likely to be introduced any time soon, for example Storey (1994) has identified three key factors with an essential effect on small business growth: characteristics of the entrepreneur, characteristics of the organization and different strategies concerning growth (Storey 1994).
A vast majority of small and medium-sized businesses are owner-managed (Bennedzen & Wolfenzon 1999; Nutek 2004). This is also evident in the creative sector. Out of those participating in our study, 73% of the 189 respondents employed maximum two people (including the entrepreneur him/herself). The concentration of ownership and management can be seen as being both a positive and a negative factor for firm growth. The positive aspect is that when the ownership and management are concentrated on just one person, there is far less pressure coming from outside stakeholders who demand the ability to maximize profits and the business to be as transparent as possible (Carney 2005; Levitas & Mcfayden 2009). On the other hand, such concentration can have a negative effect toward small business growth and the entrepreneur’s growth aspirations. This is because the concentration of ownership and management can lead to avoidance of risks and unwillingness to change the firm’s strategic choices, thus creating barriers for growth and development (Hill & Snell 1988; Hoskisson, Hitt, Johnson, & Grossman 2000; George, Wiklund, & Zahra 2005).

As suggested by de Kluyver (2000), growth brings along challenges. One of these challenges has to do with hiring the first external employee. This does not double the sales but brings along fixed labor costs. (de Kluyver 2000). At the least successful case, expanding the business may cause the entrepreneur to have a loss-bearing company instead of a flourishing one (Gibb 1990; Cunningham 1994).

It has been argued that the growth of a small business is not a self-explaining phenomenon, but that the owner-manager has a vital role when it comes to intentions to pursue growth. Hence, it would appear that the positive attitudes towards the owner-manager developing his or her company may lead to the desired outcome. (Gray 2000; Maki & Pukkinen 2000). Previous researches have introduced elements influencing business growth as well as those functioning as barriers for development. We have listed some key factors from previous researches in Table 1.
Table 1. Factors affecting business development.

<table>
<thead>
<tr>
<th>Factors facilitating growth</th>
<th>Factors hindering growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention</strong></td>
<td></td>
</tr>
<tr>
<td>• Demographic factors</td>
<td>• Deficiency of goals and vision</td>
</tr>
<tr>
<td>• Personal characteristics</td>
<td>• Non-professional attitude towards business</td>
</tr>
<tr>
<td>• Values and beliefs</td>
<td>• Protection of the lifestyle</td>
</tr>
<tr>
<td>• Age</td>
<td>• Age</td>
</tr>
<tr>
<td><strong>Capability</strong></td>
<td></td>
</tr>
<tr>
<td>• Level of education</td>
<td>• Limited leadership skills</td>
</tr>
<tr>
<td>• Expertise in the different areas of business</td>
<td>• Narrow base of competence</td>
</tr>
<tr>
<td>• Owner-manager’s ability to recognize own strengths</td>
<td>• Physical barriers / production constraints</td>
</tr>
<tr>
<td>• Products with growth potential</td>
<td>• Organization structure</td>
</tr>
<tr>
<td>• Company form</td>
<td></td>
</tr>
<tr>
<td>• Proactive learning through informal social networks</td>
<td></td>
</tr>
<tr>
<td><strong>Possibility</strong></td>
<td></td>
</tr>
<tr>
<td>• Market situation</td>
<td>• Weak position within the sector and in market</td>
</tr>
<tr>
<td>• Access to finance</td>
<td>• High dependence on outsiders</td>
</tr>
<tr>
<td>• Regulations of the public sector</td>
<td>• Adverse economic condition</td>
</tr>
<tr>
<td></td>
<td>• Negative attitude of the local government towards business development</td>
</tr>
<tr>
<td></td>
<td>• Regulations and limitations from the public sector</td>
</tr>
</tbody>
</table>

3. Research Design

3.1 The creative sector and data collection

The concept of creative industries emerged in the late 1990s primarily as a policy discourse, although the subsequent decade has seen a lively set of academic as well as industry and policy-related debates. The concept *creative industries* refers to a set of interlocking industry sectors where the creative industries are defined in terms of an industrial classification of what they do or what they produce and how they approach this task. There has been criticism of the details of the classifications (Florida 2002; Hartley 2005).

The issue of definition is an important one within the creative industry. There remains much debate about where the boundaries of the creative industries might cross with the cultural industries and the entertainment industry (Howkins 2001; Hesmodhalgh 2002). The creative industries base themselves on individual creativity, skill and talent and have a potential for wealth and job creation through the generation and exploitation of intellectual property (DCMS 2005). This includes advertising, architecture, the art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, the performing arts, publishing, software and computer games, television and radio. Cultural industries are best described as an adjunct-sector of the creative industries. Cultural industries include industries that focus on cultural tourism and heritage, museums and libraries, sports and outdoor activities and a variety of 'way of life' activities (Caves 2000; Hesmodhalgh 2002). Cultural industries are more concerned with delivering other kinds of value—including cultural wealth and social wealth—rather than primarily providing monetary value. Entertainment industry contains firms that provide, operate or engage in entertainment (e.g radio and television and films and theater).

We chose to study firms of the creative sector in the North Savo region. The creative sector is quite heterogeneous, ranging from such large firms as a newspaper printing company to sole owner enterprises such as individual craftsmen/women. After a national and international review, 12 lines of businesses were selected. In this study, we used the following classification. In Table 2, we can see the frequency of respondents in the different lines of business.
Table 2. Target groups of the study.

<table>
<thead>
<tr>
<th>Line of Business</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture and Interior design</td>
<td>11</td>
</tr>
<tr>
<td>Film industry, TV- and Radio Production and Staging</td>
<td>2</td>
</tr>
<tr>
<td>Performing Arts</td>
<td>13</td>
</tr>
<tr>
<td>Publishing</td>
<td>8</td>
</tr>
<tr>
<td>Arts and Crafts Industry and Production, Design</td>
<td>74</td>
</tr>
<tr>
<td>Exhibitors in the Creative Sector</td>
<td>4</td>
</tr>
<tr>
<td>Training and Consulting Services in the Creative Sector</td>
<td>1</td>
</tr>
<tr>
<td>Advertising and Marketing</td>
<td>35</td>
</tr>
<tr>
<td>Cultural Event Production</td>
<td>6</td>
</tr>
<tr>
<td>Applied Arts / Art, Dance and Music Training</td>
<td>2</td>
</tr>
<tr>
<td>New Media / Software and Content Creation</td>
<td>11</td>
</tr>
<tr>
<td>Visual Culture (Artists, Photographers)</td>
<td>7</td>
</tr>
<tr>
<td>Unclassified</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>187</td>
</tr>
</tbody>
</table>

In this study, quantitative research design was chosen as the research method because it enables larger sample size than qualitative research and because the aim of the research was to get generalizable results. The objective of the research was to produce versatile information and deepen the understanding on entrepreneurship in creative industries.

The questionnaire was chosen to be the data collection method because of the size of the target group. Indeed, this is an efficient way of collecting information from a large number of respondents. Furthermore, statistical techniques can also be used to determine validity, reliability, and statistical significance.

The research data presented in this paper was collected through a structured questionnaire which was sent to 855 entrepreneurs operating in the creative industry in the Northern Savo region in Finland. All respondents were informed of the purpose of the questionnaire by a cover letter. Out of the 855 entrepreneurs, the final number of respondents was 187, representing a valid return rate of 22 percent.

The questionnaire was composed of 3 parts:

- start-up of the firm and new venture launching
- development and growth of the firm
- networks and relationships of the firm
In this paper, we are concentrating on growth factors in creative industry firms.

The questionnaire consisted mainly of multiple choice questions and some open questions. The respondents were asked to indicate their degree of agreement with these statements on a five point scale ranging from 1=“strongly disagree” to 5=“strongly agree”.

3.2 Methods and analyses used

The sample frame was constructed from the data that had been collected with the structured questionnaire. The questionnaire was sent out to 855 entrepreneurs in the creative sector that operate in the Northern Savo region of Finland. Out of the 855 respondents, 583 were reached by email and the rest 272 by regular mail. A total of 187 usable replies were returned, thus providing us with a response rate of 22%. Most of the companies taking part in the survey were small. 73 % out all of the respondents employed only the entrepreneur him/herself and 58 % generated annual revenue of 40 000 euro or less.

3.3 Variables and measures

The respondents were asked about their growth plans by giving them five options (1=the company is going to reduce its activities, 2=the company is going to maintain the current level of action, 3=there is an interest in the idea of growth but the company has no clear plans for this, 4=pursuing growth is a clear part of the strategy, 5=cannot say). The respondents’ answers were then coded into the SPSS program and a dummy variable was then constructed so that the option 5 was coded as a missing value, options one and two formulated value 0 and options three and four entailed value 1. This dummy variable measured the respondents’ growth aspirations, so that 0 represented the unwillingness of the respondent to grow his or her business and 1 represented one’s willingness to grow.

After the dummy variable was constructed, a logistic regression analysis was used to find out the effect of different competencies on growth motivation. The respondents were asked to estimate their internal resources by using a 5-point Likert scale. The estimated parameters were fairly successful in explaining entrepreneurs’ growth motivation. Out of all of the observations that were made, 64,4 % were classified correctly by the logistic regression analysis.

In order to test the influence of cooperation on growth motivation, the dummy variable was first cross tabulated with a variable representing whether the entrepreneur carries out cooperation of any kind in his or her activities. Subsequently, we wanted to gain deeper knowledge on the effect of cooperation on growth motivation. Therefore, growth motivation was cross tabulated with different partners in cooperation (the
partners were local educational institutes, subcontractors, other firms in the creative sector, firms in interface sectors, firms outside the creative or interface sectors, public sector). We then employed \( X^2 \) analysis to test the statistical value between cooperation and growth motivation.

4. Results

The first research question was tested by using logistic regression analysis. The results are displayed in Table 2. In Table 2, we can observe that only two of the estimated parameters had an effect on the entrepreneurs’ growth motivation; financial management skills and personnel management skills. Entrepreneurs who had successful internal resources on financial management were also motivated to grow their businesses. Additionally, those respondents who reported poor personnel management skills were not interested in growth, as opposed to those who had good personnel skills, who were growth orientated.

Table 3. A logistic regression model of the entrepreneur’s internal resources and growth motivation
(Dependent variable: unwillingness to grow vs. willingness to grow)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core competence</td>
<td>0.87</td>
<td>.260</td>
<td>.738</td>
</tr>
<tr>
<td>Strategic know-how</td>
<td>.270</td>
<td>.251</td>
<td>.282</td>
</tr>
<tr>
<td>R&amp;D know-how</td>
<td>.254</td>
<td>.267</td>
<td>.341</td>
</tr>
<tr>
<td>Branding of the product</td>
<td>.020</td>
<td>.250</td>
<td>.938</td>
</tr>
<tr>
<td>Pricing</td>
<td>-.134</td>
<td>.272</td>
<td>.622</td>
</tr>
<tr>
<td>Recognizing market potential</td>
<td>-.270</td>
<td>.325</td>
<td>.407</td>
</tr>
<tr>
<td>Finding potential customers</td>
<td>-.035</td>
<td>.291</td>
<td>.905</td>
</tr>
<tr>
<td>Sales know-how</td>
<td>-.121</td>
<td>.307</td>
<td>.693</td>
</tr>
<tr>
<td>Conceptualizing</td>
<td>.120</td>
<td>.202</td>
<td>.552</td>
</tr>
<tr>
<td>Financial management</td>
<td>.666</td>
<td>.277</td>
<td>.016</td>
</tr>
<tr>
<td>Personnel management</td>
<td>-.647</td>
<td>.284</td>
<td>.023</td>
</tr>
<tr>
<td>Communication skills</td>
<td>.164</td>
<td>.230</td>
<td>.477</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.622</td>
<td>1,157</td>
<td>.161</td>
</tr>
</tbody>
</table>

\[ -2 \text{ Log likelihood} = 186,476 \]

Total Classification Rate = 64.4 %

The second research question was tested by using cross tabulation and \( X^2 \) test. We first cross tabulated the respondents’ growth motivation with cooperation with different partners and then employed a chi-square test in order to discover any statistical significance or value between growth intentions and cooperation. The results of the chi-square test are shown in Table 3. The results support our assumptions. The fact whether or not the company engages in cooperation activities has an impact on growth aspirations. From Table 3, we
can perceive that cooperation has a positive effect on growth intentions (p=0.018, p<0.05). Our second assumption concerning cooperation was that cooperating with firms outside one’s own line of business has also a positive effect on growth aspiration. Our results support this assumption (p=0.000, p<0.05). Furthermore, as we hypothesized, a positive link between growth aspiration and cooperation with subcontractors can also be found (p=0.041, p<0.05).

Table 4. Growth aspiration and cooperation with different partners (the significance of X² test)

<table>
<thead>
<tr>
<th>Partner</th>
<th>Cooperation</th>
<th></th>
<th>Total</th>
<th>Sig. (p&lt;0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General cooperation</td>
<td></td>
<td></td>
<td>147</td>
<td>.018</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>57</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>63</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational institutions</td>
<td></td>
<td></td>
<td>137</td>
<td>.074</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>27</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>25</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subcontractors</td>
<td></td>
<td></td>
<td>141</td>
<td>.041</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>37</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>38</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other firms in the creative sector</td>
<td></td>
<td></td>
<td>142</td>
<td>.276</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>44</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>52</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms in the interface sectors</td>
<td></td>
<td></td>
<td>139</td>
<td>.215</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>24</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>26</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms in other sectors</td>
<td></td>
<td></td>
<td>135</td>
<td>.000</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>39</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>33</td>
<td>48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td></td>
<td></td>
<td>136</td>
<td>1.000</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>19</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>28</td>
<td>54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Conclusions and future research

The aim of this study was to deepen the knowledge there is of the entrepreneurship in the creative industries. Based upon data collected from 187 creative industry firms in Northern-Savo, the paper defines a relationship between the internal resources of the entrepreneur and business growth. This study confirms what Covin and Slevin (1997), Gray (2000), and Maki and Pukkinen (2000) argued, namely that personal abilities play an important role in small business development, as well as what Wiklund and Shepherd (2003) noticed; that education, experience, and environmental dynamism magnify the effect of growth.

Even though the importance of the creative industries is widely acknowledged, empirical research about entrepreneurship in creative industries is carried out quite rarely. Because the role of the entrepreneur is crucial in the entrepreneurial process, special attention should be paid to the entrepreneur and entrepreneurial behavior. The identity of “entrepreneurs” is problematic in creative industries in that it raises the following questions: When does the innovative and creative person, motivated by freedom and self-expression, become an entrepreneur? Do those individuals consider themselves entrepreneurs (Baines & Robson 2001)? In future research, it will be important to deepen the understanding of the entrepreneur’s personality and motivations.

There is no single theory which can adequately explain small business growth (Gibb and Davies, 1990). This is partly because of the heterogeneity that exists in the various types of firms, but also because of the range of factors that can affect growth, ones which may interact with each other in different ways in varying circumstances.

It has been noted that many radical changes in society, especially in lines of industries, have created an opening for entrepreneurship in creative industries. In forthcoming studies, we will need to deepen our understanding of the different factors affecting business growth in the creative sector. We need more statistical data as well as qualitative data collected through interviews. We are carrying out an extensive statistical survey at the moment from which we are expecting to get data by the end of the year.
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Creative Industries in Finland – barriers hindering entrepreneurial development

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University of Eastern Finland, Finland

Abstract

The purpose of this study is to expand knowledge on the internal resources and the know-how of the entrepreneur, both of which have an effect on the growth of a business. Another goal of this study is to find out how cooperation with different partners such as the public sector, businesses within one’s own industry and companies outside one’s own sector affects growth. In order to meet this goal, a structured questionnaire has been sent out to entrepreneurs in creative industries in the Northern Savo region of Finland.

The focus of today’s business life has shifted from traditional manufacturing towards industries that are relying more heavily on creativity. A new concept, creative economy, has arisen from this phenomenon, and is being used by many researchers and policy makers of today. Because of this change, creative industries are becoming more widely accepted as playing an important part in economic growth. In spite of this new role of the creative industries, there is a lack of research in this field in Finland. We have therefore come to recognize that it is vital to discuss the present state of small creative businesses and the challenges that today’s creative industry is facing.

The research presented in this paper was based on a structured questionnaire that was sent to 855 entrepreneurs operating in the creative industries in the Northern Savo region at 2009. From the 855 entrepreneurs, we received a total amount of 189 usable replies.

A logistic regression analysis was used in order to find out what are the internal resources that affect the entrepreneurs’ intentions for growth. The estimated parameters were fairly successful in explaining the entrepreneurs’ willingness to either grow or not grow their companies. Out of all of the observations made, 64.4 % were classified correctly by the logistic regression analysis. Based on the model, it is revealed that successful resources for HRM and financing have a positive effect on growth.

Cooperation is recognized as a vital factor for businesses with growth intentions. We wanted to find out who the partners that the entrepreneurs in the creative sector cooperate with are and whether the entrepreneurs feel that cooperation with such partners has an effect on growth intentions. First, the willingness to grow was cross tabulated with different partners. Second, a chi-square test was used to find out statistical significance between cooperation and growth intentions. Based on the chi-square test, we propose that cooperation with firms outside of one’s own sector has a positive effect on growth. The chi-square test also reveals that a successful relationship and collaboration with subcontractors has an effect on entrepreneurs’ positive attitudes towards growth. The data showed that cooperation with companies within one’s own field of expertise was more likely to lead to growth.

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of operation takes place fairly often, but that there is no positive correlation between this kind of activity and growth intentions.

1. Introduction

We know from previous research that entrepreneur’s growth aspiration supports actual business growth (Baum, Locke, & Smith 2001; Baum, Locke, & Kirkpatrick 1998; Kolvereid & Bullvag 1996; Miner, Smith, & Bracker 1989). However, as Wiklund and Shepherd (2003) suggest, this relationship between growth aspiration and actual growth appears to be more complex than previously indicated (Wiklund & Shepherd 2003). Even though many entrepreneurs feel that growth is the goal that one should pursue, business owners also operate their own companies for a variety of reasons other than the one of maximizing their economic profits (Davidsson 1989a; Delmar 1996; Kolvereid 1992; Storey 1994). These other reasons include non-economic personal factors such as gaining independence or developing one’s own ideas (Douglas & Shepherd 2000). In this paper, we want to take a look at entrepreneurs operating in the creative sector (to be defined later on in the paper) and their growth aspirations.

The relationship between entrepreneurship and firm performance has gained much attention from researchers in the field. This paper attempts to extend knowledge on the internal resources and the know-how of the entrepreneur, both of which have an effect on business growth. Another goal of this study is to find out how cooperation with different partners such as businesses within one’s own industry, companies outside one’s own line of business and the public sector affects growth.

As previously mentioned, Wiklund and Shepherd (2003) argue, that the relationship between growth aspiration and growth is more complex than often thought. Wiklund and Shepherd (2003) agree that the nature of the relationship depends on the level of experience of the small business manager as well as the dynamism of the environment in which they operate. Furthermore, Wiklund and Shepherd point out that education, experience and environmental dynamism magnify the effect that one’s growth aspirations have on the realization of growth. (Wiklund & Shepherd 2003). In this paper, we will examine whether this is also true in the case of the creative sector. We will also include in our study an aspect of cooperation. Like Jennings and Beaver (1997) indicated, there is a reason to believe that the growth of small businesses is a result of the manager’s personal abilities. In order to expand one’s business, the manager must have the ability to secure the resources needed for growth as well as possess the capability to develop his or her organization (Covin & Slevin 1997; Sexton & Bowman-Upton 1991). Thus, as many previous studies have
demonstrated, it would appear that one’s personal abilities play an important role in small business development.

In our study, we looked at the entrepreneur’s personal abilities such as know-how and competence as well as how his or her use of networks influences growth aspirations. We divided competence in sub-groups such as core competence, strategic competence, ability to productization and branding, and compared them to growth motivation. After this was completed, we wanted to find out just what kind of influence might possible cooperation with different partners such as businesses within one’s own industry, companies outside one’s own line of business and the public sector have on growth intentions. In order to meet these goals, a structured questionnaire was sent out to entrepreneurs in the creative sector in the Northen Savo region of Finland.

The creative industries are currently subject to wide-spread attention and interest. This sector is of growing economic importance, as the creative industries have significant market value and can be argued to contribute to individual wealth and GDP. According to the Strategy for Creative Industries 2015 by the Ministry of Trade and Industry of Finland, creative industries is also a growing business sector in Finland. However, there is a lack of knowledge of entrepreneurship in the creative industries. The majority of employment and commercial activity in the creative industries takes place within small firms. Essential obstacles for entrepreneurship in creative industries include the lack of business skills and the commitment in small home markets and in low-level networking.

Two main research questions emerge:

1. How do the entrepreneur’s personal abilities such as know-how and competence influence growth aspirations?

2. What kind of cooperation between partners enables growth?

The paper proceeds as follows. First, we will present factors facilitating firm growth as well as those hindering entrepreneurial development and growth. We will also provide an overview of the effect that cooperation and the entrepreneur’s internal resources and competences have on growth intentions. Second, we will describe the research method by including a description of data collection and analysis utilized in the
study as well as in the context of the study. Third, we will analyze the data and present results. Finally, we will discuss the findings and implications of the research as well as present the need for future research.

2. Background

2.1 Factors facilitating and hindering small business development and growth

When talking about firm growth, the first task one should perform is defining what growth is. The concept of business growth varies between parties such as academic scholars and entrepreneurs (Achtenhagen, Naldi, & Melin 2010). While scholars use measures such as sales and employment, for entrepreneurs growth can mean something else, such as increased job satisfaction or gaining independence. In this study, growth aspirations are measured by the entrepreneur’s willingness to expand his or her business in terms of sales and/or employment.

Mazzarol (2000) has pointed out that in the new millennium small businesses are being seen as motors for economic growth, generators of innovations and a solution to the unemployment that has been continuing for decades. Because of this, there has been an evident shift in the field of small businesses towards firms being clearly growth-oriented (Morrison, Breen, & Ali 2003). This has been especially evident in the decision making concerning small businesses, the subsidization of small businesses and in small business research (Bridge, O’Neill, & Cromie 1998). We argue that since there are always limited resources on subsidizing small businesses, their resources should be allocated to firms with clear growth aspirations. As a result, there is a vast interest in the field of small business research so that one would understand the factors behind small business growth (Morrison et.al. 2003). To meet the goal of this study, which is to identify the key factors hindering small business development, we argue that it is vital to first understand the factors facilitating growth and development.

In spite of the lack of a universal theory explaining small business growth (Smallbone, Leigh, & North 1995) and the fact that no such theory is likely to be introduced any time soon, for example Storey (1994) has identified three key factors with an essential effect on small business growth: characteristics of the entrepreneur, characteristics of the organization and different strategies concerning growth (Storey 1994).

A vast majority of small and medium-sized businesses are owner-managed (Bennedzen & Wolfenzon 1999; Nutek 2004). This is also evident in the creative sector. Out of those participating in our study, 73 % of the
189 respondents employed maximum two people (including the entrepreneur him/herself). The concentration of ownership and management can be seen as being both a positive and a negative factor for firm growth. The positive aspect is that when the ownership and management are concentrated on just one person, there is far less pressure coming from outside stakeholders who demand the ability to maximize profits and the business to be as transparent as possible (Carney 2005; Levitas & McFayden 2009). On the other hand, such concentration can have a negative effect toward small business growth and the entrepreneur’s growth aspirations. This is because the concentration of ownership and management can lead to avoidance of risks and unwillingness to change the firm’s strategic choices, thus creating barriers for growth and development (Hill & Snell 1988; Hoskisson, Hitt, Johnson, & Grossman 2000; George, Wiklund, & Zahra 2005).

As suggested by de Kluyver (2000), growth brings along challenges. One of these challenges has to do with hiring the first external employee. This does not double the sales but brings along fixed labor costs. (de Kluyver 2000). At the least successful case, expanding the business may cause the entrepreneur to have a loss-bearing company instead of a flourishing one (Gibb 1990; Cunningham 1994).

It has been argued that the growth of a small business is not a self-explaining phenomenon, but that the owner-manager has a vital role when it comes to intentions to pursue growth. Hence, it would appear that the positive attitudes towards the owner-manager developing his or her company may lead to the desired outcome. (Gray 2000; Maki & Pukkinen 2000). Previous researches have introduced elements influencing business growth as well as those functioning as barriers for development. We have listed some key factors from previous researches in Table 1.
Table 1. Factors affecting business development.

<table>
<thead>
<tr>
<th>Factors facilitating growth</th>
<th>Factors hindering growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention</strong></td>
<td></td>
</tr>
<tr>
<td>• Demographic factors</td>
<td>• Deficiency of goals and vision</td>
</tr>
<tr>
<td>• Personal characteristics</td>
<td>• Non-professional attitude towards business</td>
</tr>
<tr>
<td>• Values and beliefs</td>
<td>• Protection of the lifestyle</td>
</tr>
<tr>
<td>• Age</td>
<td>• Age</td>
</tr>
<tr>
<td><strong>Capability</strong></td>
<td></td>
</tr>
<tr>
<td>• Level of education</td>
<td>• Limited leadership skills</td>
</tr>
<tr>
<td>• Expertise in the different areas of business</td>
<td>• Narrow base of competence</td>
</tr>
<tr>
<td>• Owner-manager’s ability to recognize own strengths</td>
<td>• Physical barriers / production constraints</td>
</tr>
<tr>
<td>• Products with growth potential</td>
<td>• Organization structure</td>
</tr>
<tr>
<td>• Company form</td>
<td></td>
</tr>
<tr>
<td>• Proactive learning through informal social networks</td>
<td></td>
</tr>
<tr>
<td><strong>Possibility</strong></td>
<td></td>
</tr>
<tr>
<td>• Market situation</td>
<td>• Weak position within the sector and in market</td>
</tr>
<tr>
<td>• Access to finance</td>
<td>• High dependence on outsiders</td>
</tr>
<tr>
<td>• Regulations of the public sector</td>
<td>• Adverse economic condition</td>
</tr>
<tr>
<td></td>
<td>• Negative attitude of the local government towards business development</td>
</tr>
<tr>
<td></td>
<td>• Regulations and limitations from the public sector</td>
</tr>
</tbody>
</table>

3. Research Design

3.1 The creative sector and data collection

The concept of creative industries emerged in the late 1990s primarily as a policy discourse, although the subsequent decade has seen a lively set of academic as well as industry and policy-related debates. The concept *creative industries* refers to a set of interlocking industry sectors where the creative industries are defined in terms of an industrial classification of what they do or what they produce and how they approach this task. There has been criticism of the details of the classifications (Florida 2002; Hartley 2005).

The issue of definition is an important one within the creative industry. There remains much debate about where the boundaries of the creative industries might cross with the cultural industries and the entertainment industry (Howkins 2001; Hesmodhalgh 2002). The creative industries base themselves on individual creativity, skill and talent and have a potential for wealth and job creation through the generation and exploitation of intellectual property (DCMS 2005). This includes advertising, architecture, the art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, the performing arts, publishing, software and computer games, television and radio. Cultural industries are best described as an adjunct-sector of the creative industries. Cultural industries include industries that focus on cultural tourism and heritage, museums and libraries, sports and outdoor activities and a variety of ‘way of life’ activities (Caves 2000; Hesmodhalgh 2002). Cultural industries are more concerned with delivering other kinds of value—including cultural wealth and social wealth—rather than primarily providing monetary value. Entertainment industry contains firms that provide, operate or engage in entertainment (e.g radio and television and films and theater).

We chose to study firms of the creative sector in the North Savo region. The creative sector is quite heterogeneous, ranging from such large firms as a newspaper printing company to sole owner enterprises such as individual craftsmen/women. After a national and international review, 12 lines of businesses were selected. In this study, we used the following classification. In Table 2, we can see the frequency of respondents in the different lines of business.
In this study, quantitative research design was chosen as the research method because it enables larger sample size than qualitative research and because the aim of the research was to get generalizable results. The objective of the research was to produce versatile information and deepen the understanding on entrepreneurship in creative industries.

The questionnaire was chosen to be the data collection method because of the size of the target group. Indeed, this is an efficient way of collecting information from a large number of respondents. Furthermore, statistical techniques can also be used to determine validity, reliability, and statistical significance.

The research data presented in this paper was collected through a structured questionnaire which was sent to 855 entrepreneurs operating in the creative industry in the Northern Savo region in Finland. All respondents were informed of the purpose of the questionnaire by a cover letter. Out of the 855 entrepreneurs, the final number of respondents was 187, representing a valid return rate of 22 percent.

The questionnaire was composed of 3 parts:
- start-up of the firm and new venture launching
- development and growth of the firm
- networks and relationships of the firm

<table>
<thead>
<tr>
<th>Line of Business</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture and Interior design</td>
<td>11</td>
</tr>
<tr>
<td>Film industry, Tv- and Radio Production and Staging</td>
<td>2</td>
</tr>
<tr>
<td>Performing Arts</td>
<td>13</td>
</tr>
<tr>
<td>Publishing</td>
<td>8</td>
</tr>
<tr>
<td>Arts and Crafts Industry and Production, Design</td>
<td>74</td>
</tr>
<tr>
<td>Exhibitors in the Creative Sector</td>
<td>4</td>
</tr>
<tr>
<td>Training and Consulting Services in the Creative Sector</td>
<td>1</td>
</tr>
<tr>
<td>Advertising and Marketing</td>
<td>35</td>
</tr>
<tr>
<td>Cultural Event Production</td>
<td>6</td>
</tr>
<tr>
<td>Applied Arts / Art, Dance and Music Training</td>
<td>2</td>
</tr>
<tr>
<td>New Media / Software and Content Creation</td>
<td>11</td>
</tr>
<tr>
<td>Visual Culture (Artists, Photographers)</td>
<td>7</td>
</tr>
<tr>
<td>Unclassified</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>187</td>
</tr>
</tbody>
</table>
In this paper, we are concentrating on growth factors in creative industry firms.

The questionnaire consisted mainly of multiple choice questions and some open questions. The respondents were asked to indicate their degree of agreement with these statements on a five point scale ranging from 1=“strongly disagree” to 5=“strongly agree”.

3.2 Methods and analyses used

The sample frame was constructed from the data that had been collected with the structured questionnaire. The questionnaire was sent out to 855 entrepreneurs in the creative sector that operate in the Northern Savo region of Finland. Out of the 855 respondents, 583 were reached by email and the rest 272 by regular mail. A total of 187 usable replies were returned, thus providing us with a response rate of 22 %. Most of the companies taking part in the survey were small. 73 % out all of the respondents employed only the entrepreneur him/herself and 58 % generated annual revenue of 40 000 euro or less.

3.3 Variables and measures

The respondents were asked about their growth plans by giving them five options (1=the company is going to reduce its activities, 2=the company is going to maintain the current level of action, 3= there is an interest in the idea of growth but the company has no clear plans for this, 4=pursuing growth is a clear part of the strategy, 5=cannot say). The respondents’ answers were then coded into the SPSS program and a dummy variable was then constructed so that the option 5 was coded as a missing value, options one and two formulated value 0 and options three and four entailed value 1. This dummy variable measured the respondents’ growth aspirations, so that 0 represented the unwillingness of the respondent to grow his or her business and 1 represented one’s willingness to grow.

After the dummy variable was constructed, a logistic regression analysis was used to find out the effect of different competencies on growth motivation. The respondents were asked to estimate their internal resources by using a 5-point Likert scale. The estimated parameters were fairly successful in explaining entrepreneurs’ growth motivation. Out of all of the observations that were made, 64,4 % were classified correctly by the logistic regression analysis.

In order to test the influence of cooperation on growth motivation, the dummy variable was first cross tabulated with a variable representing whether the entrepreneur carries out cooperation of any kind in his or her activities. Subsequently, we wanted to gain deeper knowledge on the effect of cooperation on growth motivation. Therefore, growth motivation was cross tabulated with different partners in cooperation (the
partners were local educational institutes, subcontractors, other firms in the creative sector, firms in interface sectors, firms outside the creative or interface sectors, public sector). We then employed $X^2$ analysis to test the statistical value between cooperation and growth motivation.

4. Results

The first research question was tested by using logistic regression analysis. The results are displayed in Table 2. In Table 2, we can observe that only two of the estimated parameters had an effect on the entrepreneurs’ growth motivation; financial management skills and personnel management skills. Entrepreneurs who had successful internal resources on financial management were also motivated to grow their businesses. Additionally, those respondents who reported poor personnel management skills were not interested in growth, as opposed to those who had good personnel skills, who were growth orientated.

Table 3. A logistic regression model of the entrepreneur’s internal resources and growth motivation

(Dependent variable: unwillingness to grow vs. willingness to grow)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core competence</td>
<td>0.87</td>
<td>.260</td>
<td>.738</td>
</tr>
<tr>
<td>Strategic know-how</td>
<td>.270</td>
<td>.251</td>
<td>.282</td>
</tr>
<tr>
<td>R&amp;D know-how</td>
<td>.254</td>
<td>.267</td>
<td>.341</td>
</tr>
<tr>
<td>Branding of the product</td>
<td>.020</td>
<td>.250</td>
<td>.938</td>
</tr>
<tr>
<td>Pricing</td>
<td>-.134</td>
<td>.272</td>
<td>.622</td>
</tr>
<tr>
<td>Recognizing market potential</td>
<td>-.270</td>
<td>.325</td>
<td>.407</td>
</tr>
<tr>
<td>Finding potential customers</td>
<td>-.035</td>
<td>.291</td>
<td>.905</td>
</tr>
<tr>
<td>Sales know-how</td>
<td>-.121</td>
<td>.307</td>
<td>.693</td>
</tr>
<tr>
<td>Conceptualizing</td>
<td>.120</td>
<td>.202</td>
<td>.552</td>
</tr>
<tr>
<td>Financial management</td>
<td>.666</td>
<td>.277</td>
<td>.016</td>
</tr>
<tr>
<td>Personnel management</td>
<td>-.647</td>
<td>.284</td>
<td>.023</td>
</tr>
<tr>
<td>Communication skills</td>
<td>.164</td>
<td>.230</td>
<td>.477</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.622</td>
<td>1,157</td>
<td>.161</td>
</tr>
</tbody>
</table>

-2 Log likelihood = 186,476
Total Classification Rate = 64.4 %

The second research question was tested by using cross tabulation and $X^2$ test. We first cross tabulated the respondents’ growth motivation with cooperation with different partners and then employed a chi-square test in order to discover any statistical significance or value between growth intentions and cooperation. The results of the chi-square test are shown in Table 3. The results support our assumptions. The fact whether or not the company engages in cooperation activities has an impact on growth aspirations. From Table 3, we can perceive that cooperation has a positive effect on growth intentions ($p=0.018, p<0.05$). Our second assumption concerning cooperation was that cooperating with firms outside one’s own line of business has
also a positive effect on growth aspiration. Our results support this assumption (p=0.000, p<0.05). Furthermore, as we hypothesized, a positive link between growth aspiration and cooperation with subcontractors can also be found (p=0.041, p<0.05).

Table 4. Growth aspiration and cooperation with different partners (the significance of X² test)

<table>
<thead>
<tr>
<th>Partner</th>
<th>Cooperation</th>
<th>Total</th>
<th>Sig. (p&lt;0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>General cooperation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willing to grow</td>
<td>57</td>
<td>6</td>
<td>147</td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>63</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Educational institutions</td>
<td></td>
<td></td>
<td>137</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>27</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>25</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Subcontractors</td>
<td></td>
<td></td>
<td>141</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>37</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>38</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Other firms in the creative sector</td>
<td></td>
<td></td>
<td>142</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>44</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>52</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Firms in the interface sectors</td>
<td></td>
<td></td>
<td>139</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>24</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>26</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Firms in other sectors</td>
<td></td>
<td></td>
<td>135</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>39</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>33</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td></td>
<td></td>
<td>136</td>
</tr>
<tr>
<td>Willing to grow</td>
<td>19</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Not willing to grow</td>
<td>28</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>
5. Conclusions and future research

The aim of this study was to deepen the knowledge there is of the entrepreneurship in the creative industries. Based upon data collected from 187 creative industry firms in Northern-Savo, the paper defines a relationship between the internal resources of the entrepreneur and business growth. This study confirms what Covin and Slevin (1997), Gray (2000), and Maki and Pukkinen (2000) argued, namely that personal abilities play an important role in small business development, as well as what Wiklund and Shepherd (2003) noticed; that education, experience, and environmental dynamism magnify the effect of growth.

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There is no single theory which can adequately explain small business growth (Gibb and Davies, 1990). This is partly because of the heterogeneity that exists in the various types of firms, but also because of the range of factors that can affect growth, ones which may interact with each other in different ways in varying circumstances.

It has been noted that many radical changes in society, especially in lines of industries, have created an opening for entrepreneurship in creative industries. In forthcoming studies, we will need to deepen our understanding of the different factors affecting business growth in the creative sector. We need more statistical data as well as qualitative data collected through interviews. We are carrying out an extensive statistical survey at the moment from which we are expecting to get data by the end of the year.
References


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Abstract
This paper presents results of a study identifying specific sets of intra-firm activities, referred to as intra-firm orientations. The authors distinguish entrepreneurial orientation, change orientation, and knowledge orientation. The authors use factor analysis to test hypotheses about the presence of selected orientations and about the positive impact of intra-firm orientations on firm growth, and to investigate the dominant intra-firm orientation in three industries: wholesale and retail trade, HoReCa, and the IT industry. Results of empirical analysis of 500 small and medium-sized Russian enterprises show that change orientation and knowledge orientation positively influence growth. It was also found that different intra-firm orientations dominate in different industries.

Key words:
Intra-firm orientations, firm growth, knowledge management, entrepreneurship, organizational changes, factor analysis.

Introduction
In recent decades, management theorists have begun to pay attention to growth processes of firms and organizational behavior involved (Evans 1987b; Davidsson, Delmar, and Wiklund 2002; Delmar, Davidsson, and Gartner 2003; McKelvie, Wiklund, and Davidsson 2006). A comprehensive theory of growth of the firm is under development to address organizational factors that affect emergence, unfolding, and completion of growth processes. The evolution of management theory has shifted the explanatory focus from external to internal factors.

Exploring management characteristics of the firm seems to be a promising area of research because it highlights the importance of various managerial actions and shows their influence on a firm’s growth. On the one hand, this stream of research corresponds to...
development of the theory of firm growth. On the other hand, it is an important applied problem in the context of a limited number of studies of firm growth in Russia. Thus, we need to understand what organizational factors a firm should develop to achieve sustainable growth, which factors should be taken into account in making decisions about growth, and which factors are subject to change in this process. As a rule, companies experience growth if they have exceptional competitive advantages. Recent developments in strategic management suggest sustainable competitive advantage is based on a firm’s so-called dynamic capabilities (Helfat et al. 2007). These facilitate extraction of Schumpeterian rents in a rapidly changing environment through acquisition and dissemination of knowledge, as well as transformation of organizational resource bases to achieve fit and even take the lead in their environment (Teece, Pisano, and Shuen 1997).

In this paper, we use the resource-based approach to examine growth of the firm, that is the impact of internal organizational characteristics on growth. These characteristics include organizational capabilities to create, acquire, and change the firm’s resource base. The paper proposes an original perspective of the firm’s internal activities, assuming all firms possess certain characteristics that describe general principles of its activities. These are intra-firm orientation: entrepreneurial orientation, knowledge orientation, and change orientation.

The paper consists of five parts. In the first part we formulate and provide theoretical foundations for our hypotheses. The second part describes research methods. In the third part we analyze findings and test hypotheses. The fourth part discusses results of empirical and theoretical analyses. In the fifth and final part we present main conclusions, note theoretical and practical implications of the study, and describe its limitations and directions for future research in this area.

Theory and Hypotheses
According to E. Penrose, opportunities for firm growth are related to its internal resources and to changes in a firm’s external and internal environments (Davidsson, Delmar, and Wiklund 2002). Firm growth is a consequence of two different means of resource allocation. The first is exploration or searching for new ways to use existing resources, or allocation of new types of resources. This requires intensive accumulation of knowledge about resources and their potential applications through research and proactive investigations. In academic discussions on entrepreneurship, this is called “organic growth.” The second growth path, an external one, unfolds through acquisitions (Penrose 1959). Entrepreneurial growth is usually associated with organic growth, or the internal expansion of operations, process, and product improvements. Davidsson, Steffens and Fitzsimons (2009) empirically demonstrate that profitable firms manage to develop unique advantages for key resource positions, allowing them to expand activities. Thus the firm has to develop a sustainable competitive advantage to initiate and maintain sustainable growth.

**Intra-firm orientations: basic types**

The term "orientation" is not new in management. Some studies define this as “a certain established set of actions and processes” (Lumpkin, and Dess 1996; Miles, and Arnold 1991; Morris, and Paul 1987; Smart, and Conant 1994). Entrepreneurial orientation of the firm (EO) is represented in literature on entrepreneurship and management. According to some studies, organizations with an entrepreneurial orientation focus more on seeking new opportunities, taking risks, and exploiting opportunities (Lumpkin, and Dess 1996). Additionally, the concept of dynamic capabilities (Teece, Pisano, and Shuen 1997) proposes a set of three different processes: the ability (1) to capture or anticipate unique opportunities and threats; (2) to prepare the firm to seize these opportunities; and (3) to transform the company’s current asset position for better performance (Teece 2007). Clearly, entrepreneurial orientation is responsible for sensing environmental signals, generating novel ideas, for organizational
performance and actions enabling the company to be proactive and to introduce a variety of
innovations (Lumpkin, and Dess 1996; Covin, and Slevin 1991). Transforming a firm’s current
position implies timely transformation and recombination of organizational resources and
capabilities in light of its market situation (Barney, 2002; Teece, Pisano, and Shuen 1997). We
can conceive of this as a particular type of intra-firm orientation—change orientation—analogous to entrepreneurial orientation.

Processes that enable cost savings from organizational changes, enable sensing more
information about environmental signals and preparing firm for transformation and seizing
external opportunities are related to knowledge management. Thus, we propose another type
of intra-firm orientation: knowledge orientation.

We claim that these orientations make dynamic capabilities generic for all firms,
although firms exercise dynamic capabilities differently depending on industry conditions and
level of development of these orientations. All this said, we also suggest that dynamic
capabilities are not the best tool for empirical analysis, as they consist of numerous
organizational routines (Nelson, and Winter 1982). We propose combining organizational
routines into more simple constructs - intra-firm orientations. Our first hypothesis is as follows:

Hypothesis One. There are at least three explicit intra-firm orientations in any firm:
entrepreneurial orientation, change orientation and knowledge orientation.

It is also important to understand how intra-firm orientations affect performance,
particularly growth. According to Davidsson, Steffens, and Fitzsimons (2009), profitable firms
develop distinctive advantages vis-à-vis key resource positions, allowing them to expand
activities. The general mechanism of acquiring a competitive advantage by developing intra-
firm orientations can be depicted in the following way (see Figure One).
Sustainable competitive advantage arising from dynamic capabilities appears as a result of timely adjustment and modification of the resource base to match market conditions. Firms that develop change orientation, entrepreneurial orientation, and knowledge management orientation will grow. Let us consider in more detail each of the proposed orientations as they impact growth.

**Change orientation.** Processes connected with intra-firm transformation make up change orientation. The more such processes are practiced within the company, the better it is aimed at undertaking change initiatives. McGuinness and Morgan (2003) define organizational change capability as "an example of an organisational dynamic capability, its essence being a capability for leading and managing a cascading series of inter-related change initiatives that are consistent with an intended type of strategy dynamics." Eisenhardt and Martin (2000) have a similar understanding of change capability: the ability to understand what internal transformations should be initiated. This capacity for change implies the existence of advanced management processes of change in the company.

How does this process of change unfold within the company? This process is a mesh of continuous daily activities to bring about long-term adaptation to unpredictable and
challenging environmental conditions (Weick, and Quinn 1999). When an organization needs to update its skills, it has to develop new processes and values and to provide necessary organizational space to elaborate these capabilities. According to Christensen and Overdorf (2000) there are three ways to do this:

- allocate new organizational elements, where new processes will be developed;
- create new organization, where work will be carried out in accordance with new principles;
- acquire firms that possess values and processes similar to those needed.

Thus, change orientation implies certain organizational capabilities that provide quick and efficient transformation (that is appropriate organizational structure) and scope for strategic change to transform structures and processes in the company. In this case the firm seizes market opportunities faster than competitors and can launch more new product lines and win a larger market share. Change orientation comprises changes in organizational strategy, structure, and culture; launching new product lines; and transforming business procedures. In general, advanced change orientation facilitates adjusting all organizational elements in the face of an uncertain or changing market context. This allows the company to generate higher profits from increased sales volume enabling the firm to grow. We thus propose that change orientation positively affects change in the rate of sales growth.

Hypothesis Two. Change orientation positively influences growth of the firm.

Entrepreneurial orientation. Entrepreneurial function is aimed at producing new resources, processes, distribution channels, and markets. Companies that follow the entrepreneurial approach are characterized by proactivity, openness, innovativeness, and risk-taking. The essence of entrepreneurial orientation should be built into organizational processes, practices, decision-making and strategic orientation (Miller, and Friesen 1978). Innovativeness is an ability to carry out experiments, to pay attention to new ideas, and to reject established
practices. Proactivity is the inherent ability to see beyond current boundaries and to sense future opportunities. It is also the ability to analyze forthcoming situations and transformations, as well as to launch products or services at the right time, or to change internal organizational elements to make the organization comply with future conditions. Risk-taking is the ability to invest various resources in projects with unclear results, unusually with large return or losses. These are three directions in which entrepreneurial/innovative orientation is expressed (Lumkin, and Dess 2001).

Based on the vision of market changes, innovations, and consumer preferences, managers decide whether to begin resource recombination (Jantunen et al. 2005). The number of opportunities for growth is limited by the ability of managers to recognize opportunities and the desire to implement them with existing resources. Therefore, growth arises from discovering market opportunities and transforming resources to seize them.

Wiklund (1999) shows that entrepreneurial orientation provides a positive effect on firm performance, as it aids recognition of opportunities for resource allocation and changes in customer preferences faster than competitors. In addition, entrepreneurship is traditionally considered to be an indicator of rapidly growing economies (Lumpkin, and Dess 1996). For example, Cohen and Slevin (1991) demonstrated that firms implementing the entrepreneurial approach outperform the industry average. Thus, based on extensive evidence that better results depend on entrepreneurial management processes, we suggest a hypothesis about the positive influence of the entrepreneurial orientation on growth.

**Hypothesis Three.** Entrepreneurial orientation positively influences growth.

**Knowledge orientation.** According to Zollo and Winter (2002), dynamic capabilities evolve through learning processes. Processes of learning and knowledge management are expressed in the firm’s knowledge orientation, which includes such areas as experience accumulation, knowledge sharing, and codification.
Organizational knowledge is usually divided into information and know-how (Kogut, Zander 1992). Information is knowledge that can be transferred without violating its integrity, if there is a certain order in understanding. Know-how is an accumulated set of skills, learned or acquired. Knowledge may be contained in regulations, technologies and databases. The ability to assimilate new and useful knowledge depends on the existing knowledge base and is referred to as absorptive capacity (Cohen, and Levinthal 1990). The firm accumulates a certain amount of experience over the years of its business. This experience and knowledge help broaden horizons for acquiring new knowledge that relates to the existing knowledge base. The greater the knowledge base, the more new knowledge the firm is able to "understand" and acquire (Cohen, and Levinthal 1990; Shepherd, and DeTienne 2001). Learning is vital for creating new capabilities. Organizational abilities to collect, build, and reconfigure a knowledge base constitute a source of competitive advantage (Wolff, and Pett 2007; Eisenhardt, and Martin 2000).

Exploiting existing knowledge allows the firm to build capacity for growth (Cyert, and March 1963). Further, knowledge management helps to investigate processes of improving organizational efficiency over time (a learning effect), which provides such additional advantages as better ability to integrate resources, reduce costs and better management of organic growth (Salvato, Lassini, and Wiklund 2006). Knowledge and the ability to manage knowledge assets affect performance positively (Jantunen 2005b). Resources not in use at the moment ("slack") may be combined with other unallocated resources to create new "outputs" (Penrose 1959; Pitelis 2002). From this we derive our next hypothesis:

**Hypothesis Four.** Knowledge orientation positively influences the growth.

We suggest that in various industries intra-firm orientations appear with different intensity. The principle of path dependency (Teece, Pisano, and Shuen 1997) suggests that organizations develop capabilities and accumulate resources necessary for a certain type of
activity, and this organizational history leaves an imprint on the trajectory of future development. Thus, firms operating in different industries require different capabilities. It can be assumed that in different industries organizations develop different processes and focus on certain skills and resources (Barney 2002; Sakakibara 1997a).

We believe that in every company there are the three intra-firm orientations presented above. Developing all three orientations is an important condition for acquiring and retaining a sustainable competitive advantage. However, from the point of view of business practice, it is logical to assume that in different industries some orientations will appear differently than in others, as firms emphasize processes of primarily importance for creating value and performing successfully in their own industry. Therefore, we posit the following hypothesis:

_Hypothesis Five._ In different industries, firms demonstrate different dominating intra-firm orientations.

**Method**

**Sample**

The project "Growth and success factors of Russian entrepreneurial firms" surveyed 500 companies from Moscow and St. Petersburg. Respondents operated in three industries: 1) wholesale and retail trade, 2) hotels, restaurants and cafes (HoReCa), and 3) information technologies (IT). The sample includes small and medium-sized enterprises with 3-500 employees. We selected these industries because they experienced the highest growth rates in the pre-crisis period (2007-2008). In addition, this sample provides necessary heterogeneity of firms for cross-sectional comparison. Distribution and characteristics of companies in the sample are as follows: 356 companies (71.2 percent) are located in Moscow and 144 (28.8 percent) in St. Petersburg. There are 359 (71.8 percent) companies in wholesale and retail trade, 75 (15 percent), firms in HoReCa, and 66 (13.2 percent) firms in the telecommunication sector. In September-December 2008 top managers of these companies took part in a survey,
which consisted of a structured questionnaire. Questions were related to business in the period 2006-2007. Questions were divided into groups according to different areas of management, posed as statements about organizational activities. Answer options ranged from one “totally disagree” to five “completely agree.” Research questions are provided in Appendix One.

Analysis

We used exploratory and confirmatory factor analysis. Using factor analysis one can identify possible hidden variable factors responsible for linear statistical combination and correlations between observed variables. Consequently, the main purposes of factor analysis are to identify relationships between variables, to classify them, and to reduce the number of overall variables.

As independent variables (items) we take questions from the questionnaire, which we combined in factors, or complex variables, according to factor analysis. We use percentage ratio of the rate of sales growth in 2007 to 2006. Typically researchers select firms with the most rapid growth to explore the growth phenomenon. Sales volume is considered the main measure of firm size, since it is given in open information sources, allows to combine short and long term perspectives, reflects consumer preferences as a result of organizational efforts, and reflects all intra-firm changes: sales are the most common indicator of growth, any organizational growth always affect sales (Delmar, Davidsson, and Gartner 2003). In addition, as control variables we use firm age and number of employees.

Model

Then we elaborate the following causal model to analyze the impact of intra-firm orientations on the rate of firm growth (Figure Two).
In Fig. Two oval icons show factors or intra-firm orientations. Each orientation is a hidden variable composed of a set of observed ones (in Fig. Two observed variables-factor loadings are represented by rectangular icons on the left). Arrows indicate the impact intra-firm orientations exert on the rate of sales growth, which represent the observed variable. In addition, the model includes control variables such as firm age and number of employees.

**Results**

Let us proceed directly to the results of the analysis. We turn first to exploratory factor analysis to reveal intra-firm orientations. This analysis was carried out using statistical package SPSS 17.0 with principal components analysis method.

The quality of the sample for factor analysis is verified using the criterion of the Kaiser-Meyer-Olkin measure of sampling adequacy. The quality of the sample, its reliability for the factor analysis, is high: $KMO = 0.877$, with significance level $p < 0.001$ (an acceptable level is
$KMO > 0.5$). It shows high adequacy of the factor model to the correlation matrix of a given set of variables (Gusev, Izmailov, and Mihaylevskaya 1987). The next step is to identify a sufficient number of factors for analysis. We need to investigate what percentage of variance of variables can be explained with the necessary number of factors. For our study, it is necessary that an acceptable percentage of variance be explained with three factors. Acceptable percentage of the explained variance should be above 50 percent for a pre-specified number of factors (Velicer, and Jackson 1990). In our study, three factors explain 53 percent of variance.

The next step in analysis is to examine factor loadings of the main factors identified in Table One. From this table we remove components with a factor loading less than 0.5. This provides the simplest structure of factors (Fabrigar et al., 1999).

### Table One

**Factor Loadings**

<table>
<thead>
<tr>
<th>Question</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6_1_7: We implement the experience of industry top-performers and the top-performers in other industry in our practices.</td>
<td>.824</td>
</tr>
<tr>
<td>Q6_1_8: We implement the changes, which originate from our partners (clients, suppliers, subcontractors).</td>
<td>.794</td>
</tr>
<tr>
<td>Q6_1_5: The success in our industry is predetermined by knowledge and experience gained during long time period.</td>
<td>.771</td>
</tr>
<tr>
<td>Q6_1_4: We actively use technical means of information sharing and storage (databases, forums, intranet) in our company.</td>
<td>.702</td>
</tr>
<tr>
<td>Q6_1_6: Informal liaisons with partners play big role for the success in our industry (clients, suppliers, government).</td>
<td>.660</td>
</tr>
<tr>
<td>Q6_2_5: We constantly search for new methods of problems solving and task implementation in our company.</td>
<td>.560</td>
</tr>
<tr>
<td>Q6_2_6: We stimulate the creative atmosphere aimed at new ideas origination, employee’s initiatives in our company.</td>
<td>.520</td>
</tr>
<tr>
<td>Q6_3_4: We usually find resources in our company unused in any existing projects to use them in a new project.</td>
<td>.735</td>
</tr>
<tr>
<td>Q6_3_3: Our employees usually have spare time for their own projects.</td>
<td>.711</td>
</tr>
<tr>
<td>Q6_3_2: We appreciate the non-standard, risky decision taking</td>
<td>.696</td>
</tr>
</tbody>
</table>
even if it causes problems.

Q6_2_3: The effectiveness of our company's activities depends on non-standard management practices.  

Q6_2_2: Our company reclaims new, unique segments for our market.

Q6_2_1: There are the technologies that originate from our company among those we use in our activity.

Q6_3_5: Usually we have a buffer pool of resources to use then in some shortage situations.

Q6_2_1: Our company support the employees that demonstrate initiative and take risks.

Q6_2_4: We constantly search for new methods of problems solving and task implementation in our company.

Q3_7_6: Changes in structure
Q3_7_7: Changes in strategy
Q3_7_8: Changes in the company business-processes
Q3_7_12: Significant staff transfers within the company
Q3_7_9: Changes in organizational culture
Q3_7_3: Discontinued at least one product (not production) line/service
Q3_7_4: Agreed to a new joint venture with foreign partner

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

It is clear from this table that all factors are divided into three categories: a factor associated with information and knowledge, a factor associated with risk and new ideas, and a factor associated with organizational change. Thus, we judge that for each firm there exist certain orientations that affect its work. However, to be completely confident that these factors actually form such a structure, we conducted confirmatory factor analysis of this structure of factors. The model was built and the analysis was conducted using structural equation modeling package AMOS 7.0. Model is represented on Figure Three:
To improve the quality of the model we used modification indices. To assess the quality of the model we used fit indices $CMIN/\text{Df}$, $TLI$, $CFI$, $RMSEA$, which are presented below: $CMIN/\text{Df} = 2,71$, $TLI = 0,92$, $CFI = 0,94$, $RMSEA = 0,0586$. They all meet threshold values, which suggests that the presented model describes reality fairly well (Brown 2006). This suggests that the factor model describes the selected data in a good way. CV (Convergent validity) index for that model is 0,94 and AVE index (average variance explained) is 0,88. The meanings are above average and it means, that the a 3 factor model converges on the supposed theoretical model in suggested framework.

We now turn to an analysis of weighted regression coefficients to help us ascertain the stability of the previously identified structure of factors. The analysis showed that factors have a stable structure, as all factor loadings are significant at $p < 0,001$.

Finally, we analyze the impact of intra-firm orientations on growth rate. For this we use the model shown in Figure Three. This is aggregated for all industries, and shows what impact intra-firm orientations exert on the rate of sales growth in a firm. Let us assess goodness model fit (see Table Two).

**Table Two**

The model of intra-firm orientations’ impact on firm growth: Fit indices

<table>
<thead>
<tr>
<th>Indices</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>$CMIN/\text{Df}$</td>
<td>2,95</td>
</tr>
<tr>
<td>$TLI$</td>
<td>0,89</td>
</tr>
</tbody>
</table>
Index value $CMI/Df$ is less than 3, which gives evidence to good quality of the model (Bollen 1989). Indices $TLI$ and $CFI$ have thresholds of about 0.9 and are responsible for fit of the model to the sample size (Bentler 1992). Index $RMSEA$ is responsible for measurement errors in the model. It is believed that a good value is $RMSEA < 0.08$ (Browne, and Cudeck 1993; Byrne 2009). Thus, all indices meet the required criteria; moreover chi-square value for this model is significant at $p < 0.001$.

To analyze direct impact of intra-firm orientations on the rate of sales growth we turn to a table of weighted regression coefficients (see Table Four).

**Table Four**

Weighted Regression Coefficients in the Model of Intra-firm Orientations’ Impact on the Rate of Sales Growth

<table>
<thead>
<tr>
<th>Influence</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales growth rates &lt;− Knowledge orientation</td>
<td>3.5078</td>
<td>1.7636</td>
<td>1.9890</td>
<td>0.0467**</td>
</tr>
<tr>
<td>Sales growth rates &lt;− Entrepreneurial orientation</td>
<td>-3.1924</td>
<td>1.6069</td>
<td>-1.98660</td>
<td>0.0470**</td>
</tr>
<tr>
<td>Sales growth rates &lt;− Change orientation</td>
<td>2.214</td>
<td>1.1259</td>
<td>1.9664</td>
<td>0.0493**</td>
</tr>
<tr>
<td>Sales growth rates &lt;− Number of employees</td>
<td>0.0124</td>
<td>0.0081</td>
<td>1.5303</td>
<td>0.125900</td>
</tr>
<tr>
<td>Sales growth rates &lt;− Age</td>
<td>0.0005</td>
<td>0.001</td>
<td>0.4421</td>
<td>0.658400</td>
</tr>
</tbody>
</table>

**- coefficient is significant at $p<0.05$**

The table shows that factor loadings remain significant at $p < 0.001$, which indicates the stability of factors. All three factors presenting intra-firm orientations are significant at $p<0.05$. Knowledge orientation exerts positive effect on the rate of sales growth. Entrepreneurial orientation has negative impact on the rate of sales growth, and change orientation exerts positive impact on the rate of sales growth, and, consequently, on the growth of the firm. These results are shown in Figure Four.
The impact of number of employees is not statistically significant, although the relevant coefficient is positive. The impact of the firm age also appeared to be insignificant. The relevant coefficient has a positive but small value.

To facilitate analysis of variables with different measurement scales we used standardized weighted regression coefficients. These coefficients are presented in Table Five.

**Table Five**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales growth rates</td>
<td>Knowledge orientation</td>
<td>12.9128</td>
</tr>
<tr>
<td>Sales growth rates</td>
<td>Entrepreneurial orientation</td>
<td>-12.9729</td>
</tr>
<tr>
<td>Sales growth rates</td>
<td>Change orientation</td>
<td>4.9772</td>
</tr>
<tr>
<td>Sales growth rates</td>
<td>Number of employees</td>
<td>0.0705</td>
</tr>
<tr>
<td>Sales growth rates</td>
<td>Age</td>
<td>0.0204</td>
</tr>
</tbody>
</table>

Finally, we must analyze whether there is industry impact on the differences in the predominance of one orientation over the other in firms from different industries. For this purpose we supplement the model of factor consistency analysis with dummy variables of industries (IT, HoReCa, Trade). Table Six presents the results of this analysis. The models are
significant and well describe the data from the sample, because fit indices of the model are almost identical.

Table Six

The Model of the Industry Impact on Intra-firm Orientations: Fit Indices

<table>
<thead>
<tr>
<th>Indices</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trade</td>
</tr>
<tr>
<td>CMIN/Df</td>
<td>2,76</td>
</tr>
<tr>
<td>TLI</td>
<td>0,91</td>
</tr>
<tr>
<td>CFI</td>
<td>0,93</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0,0595</td>
</tr>
</tbody>
</table>

Then we analyze industrial background of the firms to discover what influence industrial background exerts on intra-firm orientations (positive or negative). For this purpose we conducted an analysis of regression coefficients (Table Seven).

Table Seven

Industry Impact on Intra-firm Orientations: Weighted Regression Coefficients

<table>
<thead>
<tr>
<th>Variables influence</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge orientation &lt;--- it</td>
<td>.4441</td>
<td>.0873</td>
<td>5.0885</td>
<td>***</td>
</tr>
<tr>
<td>Change orientation &lt;--- it</td>
<td>-.3329</td>
<td>.0616</td>
<td>-5.4011</td>
<td>***</td>
</tr>
<tr>
<td>Entrepren. orientation &lt;--- it</td>
<td>.1023</td>
<td>.0912</td>
<td>1,1218</td>
<td>.2619</td>
</tr>
<tr>
<td>Knowledge orientation &lt;--- Horeca</td>
<td>-.2725</td>
<td>.0826</td>
<td>-3.2986</td>
<td>***</td>
</tr>
<tr>
<td>Change orientation &lt;--- Horeca</td>
<td>.0482</td>
<td>.0552</td>
<td>.8730</td>
<td>.3826</td>
</tr>
<tr>
<td>Entrepren. orientation &lt;--- Horeca</td>
<td>-.3683</td>
<td>.0891</td>
<td>-4.1324</td>
<td>***</td>
</tr>
<tr>
<td>Knowledge orientation &lt;--- trade</td>
<td>-.0793</td>
<td>.0639</td>
<td>-1.2396</td>
<td>.2151</td>
</tr>
<tr>
<td>Change orientation &lt;--- trade</td>
<td>.1560</td>
<td>.0448</td>
<td>3.4864</td>
<td>***</td>
</tr>
<tr>
<td>Entrepren. orientation &lt;--- trade</td>
<td>.1727</td>
<td>.0696</td>
<td>2.4818</td>
<td>.0131**</td>
</tr>
</tbody>
</table>

** - level of significance p<0,05
*** - level of significance p<0,001

Wholesale and retail trade industrial background increases change and entrepreneurial orientations of the firm, but reduces its knowledge orientation. It is worth noting that in this case the influence of industry background on knowledge orientation is not statistically
significant. HoReCa industrial background lowers knowledge and entrepreneurial orientations of the firm, and increases change orientation, although in this case, this effect is statistically insignificant. IT-industrial background increases knowledge and entrepreneurial orientations of the firm, and reduces its change orientation. Impact on entrepreneurial orientation is statistically insignificant.

Discussion

Based on the data analysis we draw the following conclusions. First, Hypothesis One, which proposed the presence of three intra-firm orientations, was supported. Factors identified in the exploratory factor analysis explain more than 50 percent of variance. The structural model also confirmed that factor loadings were divided according to the proposed theory of three intra-firm orientations: knowledge orientation, entrepreneurial orientation, and change orientation. \( CV \) and \( AVE \) indices show appropriate meanings. This is supported by a high goodness of fit of the model and significance of weighted regression coefficients in model.

Hypothesis Two, proposing the positive influence of change orientation on growth, was also supported. Internal organizational transformation positively affects growth. At significance level \( p < 0.05 \), the coefficient is positive. This means changes in strategy, structure, review of business processes, and culture development lead to more successful sales. This is logical, because the company renews core principles and conducts activities based on new rules. This allows the company to acquire a competitive advantage and successfully sell its products/services. Internal transformation does not allow competitors to copy such organizational achievements quickly.

Hypothesis Three, proposing the positive impact of entrepreneurial orientation on growth, is not supported. The coefficient is significant at \( p < 0.05 \), but it is negative, indicating a decrease in growth rate during the development of processes aimed at taking risks and creating new ideas. In general, we suggest that the entrepreneurial way of doing business, implying the
search for new ideas, exerts a positive effect on firm growth in the long term but not in the short term that we discussed in this study. This is consistent with a number of studies; for example, Adizes (1988) offers the PAEI model, where the code E (entrepreneurial) stands for the long-term function of entrepreneurial management. In addition, according to results of Russian studies, leaders of Russian companies note that the entrepreneurial style of doing business provides time-delayed results (Shirokova et al. 2009). In the short term, implementation of innovations (product or organizational innovations) may not lead to immediate growth. On the contrary, time is needed for adoption and integration of innovation, which leads to slower sales growth. Indeed, many people need time to become involved in consumption of a new product; employees need time to get used to new methods and technologies. In addition, in Russia entrepreneurial approach often means trial and error, leading to slower rates of sales growth.

**Hypothesis Four**, proposing the positive effect of knowledge orientation on growth, is supported. The coefficient is significant at $p<0.05$ and has a positive value, indicating an increase in the growth rate as a result of developing knowledge management practices in the company. Organizations that devote more time to collection, analysis, and dissemination of knowledge and can apply newly acquired experience to future work will grow faster than firms not engaged in such activities.

**Hypothesis Five**, proposing the impact of industrial background on the dominant intra-firm orientation, is supported: intra-firm orientations are expressed differently in different sectors. We built three models for analysis, which used three dummy variables taking the value "1" for each industry (information technology, HoReCa or trade). In IT industry knowledge orientation increases by 0.44, while change orientation decreases by 0.33. In HoReCa industry, intra-firm orientations are weakly pronounced: knowledge orientation and entrepreneurial orientation are reduced (by 0.27 and 0.36, respectively), if a firm belongs to this industry. In
trade, entrepreneurial orientation (0.17) and change orientation (0.15) increase almost equally. This means that these firms tend to reveal entrepreneurial behavior and initiate organizational changes to achieve their goals.

Results obtained above are consistent with theory. From management literature it is known that the IT industry is the most knowledge-intensive sector. Hendricks (1999) investigated companies from the telecommunication industry and noticed that they broadly use telecommuting and various applications for knowledge and information sharing. Fisher and Fisher (1998) described the positive impact of teamwork of remote software developers through a knowledge network. A Finnish study of internationalization and growth (Saarenketo, et al. 2002) investigated companies that most often grow through partnerships and networks. Companies from IT and telecommunication industry are primarily characterized by such a growth model. Thus, the dominance of knowledge management orientation in IT is logical.

In the HoReCa industry, findings from Russian companies differ from global results. Despite the global trend of network building, and of strategic and business process changes in the global restaurant and hotel business, in the Russian market firms behave more conservatively, without changing patterns of activity that they previously selected. Nowadays researchers pay more attention to transformation that occurs in service industries. For example, Shemrakova and Katkalo (2004) analyzed network development in Russian hotel businesses. Other authors demonstrate a large-scale introduction of information technology in hotels and restaurants. For example, Buhalis (1998) highlights the strategic importance of introducing electronic payment and accounting systems in the restaurant and hospitality industry. Also, in service industries managers are constantly concerned with increasing customer satisfaction level, and so they introduce quality standards, articulate operational procedures for personnel, and control the quality of supplied products (Bernhardt, Donthu, and Kennet 2000). In addition, it is worth noting that Russian firms more often become franchisees
of restaurant or hotel chains, which results in transformation of management processes. Thus, the analysis of empirical data in this industry does not allow us to identify any of intra-firm orientations as a dominant one.

Wholesale and retail trade in Russia is highly competitive, and it is impossible to do business without offering something new: products, services, developing unusual segments, bearing risk. In addition, the industry itself has a positive effect on change orientation. This means that companies in this industry not only try to offer innovative solutions to customers and explore new markets; they also focus on change from within, conducting operations with new strategies and structure, and merging into joint ventures.

Clercq, Sapienza, and Crijns (2005) investigated the influence of entrepreneurial orientation on the success of internationalization of retail companies in Europe. They showed that firms with more advanced entrepreneurial orientation conduct geographic expansion better than firms where entrepreneurial orientation is less pronounced. For his study of firms with the most advanced entrepreneurial orientation, Wiklund (1999) selected companies operating in the retail industry. The motivation for this is that historically trade is a sector with entrepreneurial actions. "Rules of the game" in this industry are largely determined by the ability to take risks, to respond quickly to market changes, and to anticipate shifts in consumer tastes, trends in service patterns, changes in the business format itself (the emergence of e-commerce), and introduction of product innovations. It appears that our findings, which show that trade is dominated by entrepreneurial orientation and change orientation, are natural in terms of development trends of this industry in Russia.

Conclusion

The purpose of this study was to identify specific patterns of firm behavior that affect intra-firm opportunities for growth. In this study we identify three intra-firm orientations that exist in every company in one form or another. We make an assumption and receive support
that in addition to entrepreneurial orientation there are two distinct types of firm behavior:
knowledge orientation and change orientation. The hypothesis of their existence in modern
firms is supported in our study of 500 small and medium-sized businesses in three industries.

We see our contribution to the theory of firm growth as the following: we prove that
intra-firm orientations, consisting of well-established routines of the company's activities, exert
an impact on the rate of growth. Knowledge orientation has a positive effect on growth; with
the development of knowledge management practices, the firm experiences an increase in the
rate of sales growth (which constitutes one of the measures of firm growth). Change orientation
also exerts a positive impact on the rate of firm growth. Thus, it can be concluded that
mastering these types of activities within the company leads to favorable effects on its
development. Entrepreneurial orientation has a negative impact on the rate of sales growth; the
hypothesis of its positive effect was not supported. We assume that entrepreneurial orientation
either exerts a delayed long-term impact (associated with initial resistance) or its impact is
mediated by other organizational mechanisms. On the other hand, entrepreneurship is an
ambiguous activity in terms of results, as is often realized unconsciously, and leads to loss of
resources. However, we believe that in more extended time interval, entrepreneurial orientation
will exert positive impact on the rate of firm growth.

It is also important that we have proved that there is industry-specific impact on the
prevalence of one or another orientation. Thus, we can conclude that success in different
sectors is promoted by different capabilities. In the IT sector knowledge management plays a
crucial role, consistent with earlier work. In trade, especially in Russia, entrepreneurship and
organizational changes are of great importance, as they allows managers to compete effectively
in this saturated market. The hypothesis of the predominance of any specific intra-firm
orientation in HoReCa sector has not been supported, but perhaps this reflects Russian
peculiarities of business in this area.
In this study we draw attention to developing supplementary activities in the organization, to building competitive advantage intensively from within, but not extensively through the use the existing resource base. Moreover, in this study we provide a list of routines that constitute factors that a practitioner can apply them in his or her context. The study also shows what types of organizational behavior lead to competitive advantage. The existence and development of three orientations lead to acquisition and retention of sustainable competitive advantage. The predominance of one of the discussed intra-firm orientations suggests that the company builds its competitive advantage on certain sets of processes (innovations, organizational change, knowledge management). Additionally, this study proved the role of intra-firm orientations in the process of firm growth. Since intra-firm orientations consist of a set of specific actions and routines (specified in Appendix 1), managers can clearly observe what actions lead directly to growth. Finally, we can conclude what action should be taken to obtain growth results in the short and long terms. For example, entrepreneurial orientation is mostly a long-term instrument, while knowledge management gives relatively fast effects (first of all by reducing transaction costs). Change orientation shows what organizational elements require revision and modification for effective adaptation.

There is no doubt that this study has limitations. One limitation is hidden in the intangible nature of independent variables. Intra-firm orientations affect the rate of sales growth, but certainly they are not decisive in changing the pace of growth. Sales volume, competitive situation, allocated resources, and the type of the market should have greater influence, but their investigation is beyond the scope of this study. In addition, intra-firm orientations seem to be measured only in numeric scale, in standard units, which are not homogenous with units of measurement for other variables. Accordingly, the other limitation is connected with the chosen method of analysis, factor analysis. This allows us to analyze qualitative data by reducing the number of observed variables and combining them into one
unobservable. This, it becomes difficult to assess how this variable should be changed, in which units and parameters it changes its values. The third limitation comes from restrictions of the sample. Companies from different industries are heterogeneously presented in the sample, which does not allow us to consider the impact of intra-firm orientation on the rate of sales growth by industry. Moreover, the selected industries may not be the most advanced in terms of managerial practices in Russia. The last limitation stems from the fact that growth is an extended process. The growth rate may vary from period to period. In the present study we analyze the growth rate for a one-year period, but further analysis should include data over several years.

Thus, as direction of future research we see both theoretical and practical investigations of measurement of intra-firm orientations and competitive advantage, building longitudinal models to analyze the impact of intra-firm characteristics on the firm growth with better consideration of internal and external growth factors.

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Appendix 1

Questionnaire

Indicate to which degree each statement is consistent or not with the policy accepted in your company:

- Q_6_1_1: We spend some time and effort to analyze the results and share the experience in the end of every project.
- Q_6_1_2: We use to describe in the documents the knowledge and experience gained during the activities.
- Q_6_1_3: If the employee leaves the company, his knowledge is likely to be lost for the company.
- Q_6_1_4: We actively use technical means of information sharing and storage (databases, forums, intranet) in our company.
- Q_6_1_5: The success in our industry is predetermined by knowledge and experience gained during long time period.
- Q_6_1_6: Informal liaisons with partners play big role for the success in our industry (clients, suppliers, government).
- Q_6_1_7: We implement the experience of industry top-performers and the top-performers in other industry in our practices.
- Q_6_1_8: We implement the changes, which originate from our partners. (clients, suppliers, subcontractors).

Indicate to which degree each statement is consistent or not with the policy accepted in your company

- Q_6_2_1: There are the technologies that originate from our company among those we use in our activity.
- Q_6_2_2: Our company reclaims new, unique segments for our market.
– Q_6_2_3: The effectiveness of our company’s activities depends on non-standard management practices.
– Q_6_2_4: Our company constantly research for new technologies and market opportunities.
– Q_6_2_5: We constantly search for new methods of problems solving and task implementation in our company.
– Q_6_2_6: We stimulate the creative atmosphere aimed at new ideas origination, employee’s initiatives in our company.

Indicate to which degree each statement is consistent or not with the policy accepted in your company

– Q_6_3_1: Our company support the employees that demonstrate initiative and take risks.
– Q_6_3_2: We appreciate the non-standard, risky decision taking even if it causes problems.
– Q_6_3_3: Our employees usually have spare time for their own projects.
– Q_6_3_4: We usually find resources in our company unused in any existing projects to use them in a new project.
– Q_6_3_5: Usually we have a buffer pool of resources to use then in some shortage situations.

Has your company undertaken any of the following initiatives over the last 2 years? If yes to which extent this change was significant?

– Q_3_7_1: Developed successfully a major new product line/service
– Q_3_7_2: Significantly upgraded an existing product line/service
– Q_3_7_3: Discontinued at least one product (not production) line/service
– Q_3_7_4: Agreed to a new joint venture with foreign partner
– Q_3_7_5: Obtained a new quality accreditation (ISO 9000, 9002 or 14,000, AGCCP, etc)
– Q_3_7_6: Changes in structure
– Q_3_7_7: Changes in strategy
– Q_3_7_8: Changes in the company business-processes
– Q_3_7_9: Changes in organizational culture
– Q_3_7_10: Introduction of new IT-systems
– Q_3_7_11: Introduction of new reward system
– Q_3_7_12: Significant staff transfers within the company

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From simple to intricate: New Zealand SME Policy Development 1978-2008

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Abstract
There has been little research into the development of New Zealand SME policy. This study examines the development of small business and entrepreneurship policy in New Zealand 1978-2008. Using a range of secondary data, supplemented with interviews with key informants, the study’s aim is to determine whether the policies pursued by successive New Zealand governments during this period have any points in common with the two extremes of small business policy, the US and the European approaches. It concludes that by 2008 small business policy in New Zealand was complex and multifaceted. The study will help policy makers set clear objectives that target the multiple needs of small businesses.

Keywords: small business policy, entrepreneurship policy, history small business policy, New Zealand

Commentators on small and medium enterprise (SME) policy agree that for governments around the world small businesses have always mattered; it is the way that they matter that has changed (Audretsch, Thurik, and Wennekers 2002; Thurik and Wennekers 2004). This is also the case of New Zealand policy development between 1978 and 2008. By 2008, policy makers were in no doubt that SMEs played a significant role in the New Zealand economy, representing over 97% of all enterprises and accounting for 31% of employment (Ministry of Economic Development 2008). Between 1978 and 1998, however, the SME sector was not considered a sector in its own right and its relevance in policy-making terms was relatively marginal. Instead, the small business sector appears to have been viewed primarily as a means by which governments addressed social or economic problems, for instance, unemployment (Easton 1997). During the final decade of the period of this study, portions of the SME sector was widely considered to be a complex one, with portions of it playing a key role in economic growth. This is reflected with the establishment of the portfolio of Minister

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for Small Business, and by the appointment of the Small Business Advisory Group (SBAG) to provide input from small businesses into government policy.

Against this background, it is possible to isolate and analyse three distinct phases over the period 1978 to 2008 where there was a gradual shift away from one-size-fits-all policies, to more targeted assistance informed by policies developed in the context of business needs and academic research. This change in approach throughout the period of this study has been gradual, with no readily identifiable and coherent set of policies designed explicitly to support the SME sector of the economy until the late 1990s.

Storey’s (1994) study on small business in the developed world highlighted the fact that the apparent absence of coherence in small business policy making is not a uniquely New Zealand phenomenon. Storey (2005) has also argued that there have been different philosophical starting points in the historical formulation of small business and entrepreneurship public policy. At one extreme is the United States (US) with a prevailing ‘competition policy’ approach to SMEs (that is, as tools to help develop competitiveness across industries and sectors (Dennis 2005)) guiding government intervention. At the other end of this spectrum is what one might term the ‘European experience’ of proactively encouraging job creation and competitiveness through a plethora of business support programmes focused on SMEs.

The New Zealand approach to formulating small business and entrepreneurship policy lies somewhere in between these two approaches. This paper examines the development of small business and entrepreneurship policy in New Zealand during the period 1978 to 2008. It considers the changes in the broader environment over this period as well as the policy instruments that were developed and used to support small businesses and/or entrepreneurs. Using a range of secondary data, supplemented by interviews with key informants (that is,
policy makers working in government under the period of consideration), the study determines whether the policies pursued by successive New Zealand governments in the period in question have any similarities with the US or European approaches to small business and entrepreneurship policy and concludes that the case of New Zealand sits somewhere between the US and European experiences. The findings of this study will help policy makers understand the need to identify clearer objectives that can target the multiple needs of small businesses in New Zealand. It will also highlight how as the awareness of the complexity of the small business sector became more widespread, policies that affect SMEs have also become more complex.

**Background**

There is very little research into the development of small business and/or entrepreneurship policy either in New Zealand or internationally. A thirty year study on enterprise policy found that in the 1970s United Kingdom (UK) public policy in this area did not exist; in the 1980s the focus was on encouraging self-employment and, as the 1990s progressed the focus shifted towards supporting existing businesses with growth potential (Greene, Mole, and Storey 2004).

In Europe more generally, governments have identified the social benefits of small business and entrepreneurship policies and contributions that small firms make to the economy and job creation. As research into entrepreneurship has shown the links with economic growth policy-makers in Europe have called for a policy framework (the so-called Lisbon Proclamation) that will lead to a more entrepreneurial society (Audretsch 2009). Calls of this type are not new, with some dating back to the 1980s (Storey 1994). In places like the UK these calls have had mixed results in terms of the overall aim of creating a more enterprising society (Huggins and Williams 2009).
By contrast, there appears to be a consensus among commentators in the US on small business and/or entrepreneurship policy that one of the main drivers of US economic policy in the twentieth century was the need to constrain the corporation (Acs and Szerb 2007; Audretsch, Thurik, and Wennekers 2002; Dennis 2005). The implications of this competition policy for the direction of small business policy in the US have been spelled out by Dennis (2005). He argues that despite there being policies that impact on small business, there is no actual small business policy. However, small businesses play an important role in this framework for government intervention, which is predicated on ensuring a level playing field for all competitors. In practice, these competition policies have had social and economic repercussions, including the promotion of ethnic minority and women entrepreneurship.

The relationship between policies that affect small businesses and their ultimate aim of resolving broader social and economic problems continued throughout most of the twentieth century, to the point that calls were made to end government intervention and allow small businesses to die out because they were not considered sources of growth. There was also a sense that such firms only appeared able to survive due to government intervention to correct market failures (Chandler 1977; Thurik and Wennekers 2004; Audretsch, Thurik and, Wennekers 2002). This approach began to change, however, in the context of research that linked job creation to small businesses (Birch 1979). This had repercussions for the way governments around the world perceived the small business sector; a new role had been found for small businesses within the economy, largely one of alleviating unemployment (Storey 1994).

Audretsch (2009) has argued that as the US has moved from a ‘Solow’ economy where physical capital (which required economies of scale such as that deployed by big businesses) was the key driver of economic growth, to the knowledge economy where entrepreneurship
has become an important conduit for the commercialisation of knowledge and consequent economic growth. In this way Audretsch (2009) argues that small business policy in the US has shifted from preserving small firms from extinction to enabling entrepreneurial ones. Further, the advent of the knowledge economy and globalisation has meant that traditional policy instruments were less effective and that too drove the development of business policy that focused on entrepreneurship (Gilbert, Audretsch, and McDougall 2004).

Methodology

The study’s aim was to determine whether the policies pursued by successive New Zealand governments in the period in question have any points in common with the US or the European approaches to small business and entrepreneurship policy. To this end, this study uses a range of secondary data, supplemented by face-to-face interviews with a select group of four key informants who were involved in policy making throughout the period under review. The first key informant had expertise in the area of export assistance and small businesses and had been involved in this area since the early 1970s. The second had extensive involvement with small businesses policy assistance programmes from the late 1980s until the mid 1990s. The third was involved in policy design and implementation of various programmes during the 1990s and the final informant had been actively involved for the final ten years of the period of this study. Using a semi-structured interview format all informants were asked to give their impressions about SME policy during the time they were working in this area.

Findings and Discussion

An examination of the literature on New Zealand small business complemented by an overview of the relevant international literature and informed by the secondary data,
including interviews with key informants suggests it is possible to identify three distinct phases in the evolution of SME policy. These are: 1978 – 1984 protectionism and regional development; 1984 – 1999 the free market and regional development; and 1998 – 2008 towards an entrepreneurial society. In considering each of these phases, an assessment is provided regarding the study’s overall objective.

1978-1984 – Protectionism and regional development – towards diversification

Throughout most of the twentieth century successive New Zealand governments pursued protectionist economic policies. As the century entered its last quarter, however, New Zealand policy makers became increasingly aware that the country’s economic reliance on the agricultural sector and narrow export base (focused on Great Britain) needed to be addressed. This was compounded when Great Britain joined the European Economic Community (EEC) in 1973. That move was interpreted as a clear and significant signal to New Zealand that there was no alternative but to seek other export markets and to diversify its economy in order to ensure its continuing viability. The government’s response to these events was to seek to insulate the economy, as far as possible, from external competition and any form of external crises, including the oil shocks of the 1970s. By 1984, the incoming Labour government was confronted with an economy that was over-regulated, with a heavily subsidised agricultural sector, soaring unemployment, historically high levels of inflation, and economic stagnation. This situation, along with the changing nature of international economic trends drove the demand for domestic liberalisation which culminated in the mid 1980s with far-reaching reforms which restructured both the domestic economy and fundamentally changed the country’s social and economic policies (Easton 1997).

The protectionist policies adopted included high tariffs and controlled importing during the 1970s by and large insulated all firms in New Zealand from external competition and
events such as the oil shocks. This very high level of protection had a twofold effect on New Zealand businesses. First, it influenced the way New Zealand businesses operated, including the limited incentive to innovate and expand given high levels of protection from competition which might have driven both innovation and growth. Second, the insulation generated by government protectionist measures allowed businesses to delay any major restructuring (Bollard and Jackson 1992).

At this time, government economic policy was largely about the diversification of exports and the expansion of the manufacturing sector (Easton 1997). The range of assistance schemes available to small firms was largely financial and included grants, suspensory loans, tax incentives, export incentives, regional development assistance, venture capital, and assistance in the development of technology (Massey and Jurado 2005). A key informant remembers this period as one where the drive to export was driven by the need to diversify the economy and export incentives were directed at all businesses, with the focus on export volume, rather than value. The form of this assistance was largely a non-discriminatory blanket approach with no efforts made to target firms that had specific characteristics that made it more likely to succeed in their export initiatives.

In the context of its emphasis on domestic protection against competition, a feature of the late 1970s through until the 1980s was to pursue a policy of regionalism - a process overseen primarily by the Department of Trade and Industry (DTI). Business assistance, in particular, was mostly channelled regionally through the Development Finance Corporation (DFC) which worked closely with DTI. As the decade proceeded, it started to dawn on policy makers that small business development had an important role to play in this context, as a commentator reflected at the time, “policy makers [began] to understand that New Zealand
business is a composite of different sorts of enterprises as well as different industries” (Le Heron, 1979, p. 43).

The DFC was established to provide funds for businesses and was also tasked with providing business assistance and advice. These last two roles were taken up by The Small Business Agency (SBA), which was introduced in 1978 and was loosely modelled on the eponymous agency in the US. In a study carried out to determine what areas the SBA should address, it was found that that the firms surveyed ranked as their most important priority the ability to raise working capital on a day-to-day basis, followed by planning (both for succession and for growth). On the other hand, those surveyed saw little value in developing financial management and budgeting skills or to the utility in keeping up to date with industry-level changes (Le Heron 1979). There was also little perceived need for assistance in terms of the development of managerial skills, nor was there a great interest in developing marketing and sales related skills which could contribute to growth. Given these results, the lack of demand for small business services also reflects the understanding small business owners had of what government could do to assist in term of their development. Two informants made the point that at this time small business owners rarely thought of government as being able to do more than protect them from competition – there was no interest in improving their competitiveness (for example through the development of managerial or marketing skills). Given the protectionist environment firms operated in during this period, it is perhaps not surprising that they took such a short-term view of the role of government and of their need to develop other business skills.

When formed the SBA was charged with encouraging cooperation and coordination between government and non-government organisations engaged in assisting small business;
collaborating with existing organisations in developing programmes of financial, technical and management assistance to small business; providing advisory consultancy and other services for small business, and; providing guarantees for loans from third parties (Devlin and Le Heron 1977). To meet these objectives, the SBA began the process of engaging communities in the delivery of small business assistance and continued to carry out these services until 1987. The difficulty remained, however, as several informants observed that while the Spa’s objectives were laudable, most New Zealand firms remained ‘locked’ into a protectionist mentality whereby the government’s assistance was only sought when further protection was required and for the government itself, business policy was formulated in the context of domestic regional economic development. An inadvertent consequence of this approach is that there was no real demand for targeted assistance to specific types of enterprises (nor was there any on offer) (Le Heron 1979).

In sum, small business in this era was seen as an agent for regional economic development, and a means to diversify the New Zealand economy away from agricultural dependency into manufacturing. The implicit assumption underpinning this period was a desire to ensure that small firms would grow and become medium or large firms and that, in effect, small businesses were simply a microcosm of a big firm. To this end business assistance during this era was generic and not targeted (Haines 1991). A ‘one-size-fits-all’ approach remained a defining characteristic of business policy over this period.

In 1983 the Closer Economic Relations (CER) trade agreement between Australian and New Zealand was signed. It opened up Australia to New Zealand exporters but also meant that the deficiencies in managerial competencies and general business practices of domestic firms were exposed (Jones 1992; Bollard and Jackson 1992). In the words of a manager at the
time, “As a result of CER we had to change our whole approach to business. We suddenly had to become marketers” (Baker 2008). In a way CER was the harbinger of New Zealand’s economic transformation in the years that followed, changing attitudes towards ‘how business was done’. This point was underlined by the informants who identified CER as a key driver for the changes that took place to the New Zealand business environment after 1984.

1984-1998 ‘Free market’ regional development – Only the fittest survive:

By 1984, the primary form of government intervention in relation to small business in New Zealand centred on financial assistance and opportunities for regional development assistance in regions that were under performing economically. What followed was one of the biggest upheavals in New Zealand’s economic history. In a series of rapid moves the currency was floated and banks deregulated (Bollard 2005). All farming subsidies were removed. The reforms also included the removal of most industry assistance and the reduction, of import protection. Along with the agricultural sector, the manufacturing sector was put under pressure. Between 1986 and 1990 the effective rate of assistance to the manufacturing sector was reduced from 40% to 25% (Bollard and Jackson 1992). According to this argument there was simply no need for a government agency to deliver such help any more.

The underlying government philosophy of this era was that the market should regulate the economy and consequently that businesses should also operate in a market environment with limited government intervention. Firms were encouraged to compete against each other, as only the best would survive (Bollard and Savage 1989). This new social and economic environment further highlighted the ‘failure of management’ in New Zealand businesses, which had been fostered by previous protectionist one-size-fits-all economic policies (Jones,
1992). One informant recalls the influence of management theory in the thinking of officials at the time (for example, the total quality management movement as well as the competition theory developed by Michael Porter. There was more discussion amongst policy-makers about the importance of developing managerial capabilities but the primary focus was still on providing generic assistance.

The period from 1984-1998 saw the disestablishment of the SBA and the focus of small business support shifting away from being delivered by central or regional government bodies. The SBA’s closure in 1987 was justified by the argument that businesses were more efficient at running businesses than government agencies. According to this argument and consistent with the prevailing ethos, there was simply no need for a government agency to deliver such help. Two informants also reported that international approaches to unemployment (such as the enterprise policy in the UK and the Birch study on small business contribution to employment) were also influencing the government to encourage self-employment.

The collapse of the world share market in late 1987 brought an end to the financial boom in New Zealand, and the aftermath prompted the New Zealand government to re-consider playing a bigger role in this sector. In fact by 1987, even those who supported the economic reforms were not convinced that the complete removal of barriers was enough for entrepreneurial firms to develop in New Zealand (Harper 1994). There were growing concerns about the fact that too few firms had embraced the free market environment in which they operated and not enough were growing. As a result a range of studies and analyses of both the international and emerging domestic evidence were carried out. And it was in this context that between 1987 and 1998 the government moved to the promotion of
regional development through partnerships with private enterprise and local community-based organisations including city and regional councils, as well as industry associations and chambers of commerce. Organisations such as the Community Employment Group were encouraged to support small businesses locally and encourage self-employment (Massey, 2006). By 1989, Regional Development Councils (re-branded a year later as Business Development Boards (BDBs)) were established. Among other things the RDCs were established to identify opportunities for regional economic development, make submissions to government on infrastructure development, encourage research into areas of regional development, act as a point of information on services available to the business community, liaise with other regional organisations and administer grants such as the Regional Development Investigation Grant (Massey and Jurado 2005).

In the following years, small business support continued to be delivered through the BDBs in four main areas: The first dealt with grants to fund the investigation of business opportunities that were new to the local area; the second area helped businesses access specialised management consultants, and; the third covered costs related to efforts to increase exports; and the fourth provided businesses with business information, capability improvement services and fostered regional cooperation (Austin, Fox, and Hamilton 1996).

At this time, changes were also made in the means of delivery of business assistance. The expectation was to build on existing strengths and skills and that this approach would lead to an increase in the number of applications for the abovementioned support areas. However the rate of businesses seeking help did not increase to the level expected. A study commissioned by the Ministry of Commerce into this phenomenon identified poor management competence as an inhibitor in firms accessing funds. It also identified a lack of growth ambition and a
desire by owner-managers to remain in control of their business, a factor that appeared to constrain SME development. (Austin, Fox and Hamilton 1996). As a result, several informants recalled the encouragement of academic research into areas such as best practice and small business growth as a way of informing policy development in the area (Campbell-Hunt, Harper and Hamilton 1993; Bollard 1993).

Studies such as the one described above, which identified and described the complex nature of the small business sector, may have been behind the direction in which policy development towards small business support was headed. Certainly, the informants interviewed for this study were aware of its key findings (and indeed of the findings of other emerging research). Although small business was increasingly being recognised as an important player in the economy, mainly as a job creation tool, the bulk of this sector was still not considered to be a contributor to growth in the economy. Indeed, the era is characterised by what has been called the ‘champagne glass’ approach to small business support. This involved a tiered form of support for businesses where the high growth, exporting SMEs (the bubbles of the champagne) were supported by Trade New Zealand. The remaining growth-oriented firms (those in the glass) were supported by the Ministry of Commerce. The remainder of the firms (those in the stem of the glass) were left to be supported by the Community Employment Group (Massey 2006). The significance of this was highlighted by several informants who commented that it meant that government policy was focussed on the more ‘glamorous’ companies, with SMEs suffering through a lower level of engagement by government (i.e. via the Community Employment Group rather than the centralised and rather better resourced and funded Trade New Zealand and Ministry of Commerce). This approach mirrors similar developments internationally in terms of small business development, as mentioned above (Thurik and Wennekers 2004).
1998-2008: Towards an entrepreneurial society

By 1999, while some businesses prospered, nowhere nearly as many as expected took advantage of the new business-oriented environment to grow. Furthermore, there was an awareness of the failure of some policies to continue to deliver, despite having been initially successful. One key informant saw this as particularly pertinent to the scheme charged with assisting firms acquire expert advice from consultants. The result of this policy was a plethora of consultants, not all of them equipped to effectively assist small businesses. The key informant reflected that, while the scheme may have been originally well intentioned and have had early successes, poor design contributed to eventual failure. Moreover, this informant was convinced that poor policy design played a big part in failed policy attempts over the period, which led to the dismantling of the BDBs in the mid-1990s.

It was over this period that a lack of management capability was identified amongst small business owner-managers and several informants recall that there were increasing calls for government policy to encourage firm growth by focussing on firm level and industry factors and decreasing the attention given to regional factors (Bollard 2005). This was followed by research by others on ‘best practice’ (Knuckey, Wai-Lei, and Meskill 1999; Knuckey, Campbell-Hunt, Carlaw, Corbett, and Massey 2002). The findings were clear. Firms needed to address issues that had already been identified as critical since the implementation of CER. Management capability, in particular, was identified as an aspect of business support that government needed to provide leadership in.

With issues such as ‘total quality management’ and ‘best practice’ firmly in the minds of policy makers, the BIZ programme was introduced in 1998 as a way of helping to build
management capability amongst SME owners and managers. To deliver the programme, the Ministry of Economic Development (MED) contracted agencies (including non-governmental organisations) to offer a range of training programmes and information services, and to deliver management capability-enhancing programmes.

This period saw the government re-evaluate the underlying premise that putting aside the agriculture and tourism sectors, manufacturing businesses could lead growth in New Zealand. As in the US, policymakers turned to encourage a knowledge driven economy and take full advantage of the opportunities of globalisation and technological advantages. This is evident in a government publication entitled *Bright Future* in 1999 which was premised on the fact that entrepreneurship is often linked to growth and innovation. It sought to encourage innovation through research and development and the revamping of the technological base of firms, an area that New Zealand was lagging in. The policy was a significant departure from agricultural commodity dependency and targeted the growth-oriented entrepreneurial firms (Hamilton and Dana 2003; New Zealand Government 1999; Massey and Jurado 2005).

The rise in interest in the role of SMEs in the economy resulted in several significant developments over the period. Towards 2001, there was for the first time a Minister for Small Business. Informants recall this as being a significant political symbol of the changing perception of the sector. It was against this background that, in 2002, the government launched the Growth and Innovation Framework (GIF), which spelled out the government’s belief that innovation was a pre-requisite for firm growth. Through this framework SMEs played an increasingly visible part in the government’s economic policy, not least because entrepreneurial, innovative and growth-oriented firms are often small. The new policy approach was now directed at growth-oriented enterprises and regional development was no
longer the driving force of small business policy. Policy instruments were also refined in order to target start-ups and particular industries and sub-sectors. Small businesses were encouraged to pursue best practice to enhance productivity and remain competitive in the global environment.

In 2006, the Economic Transformation Agenda (ETA) was launched specifically to address New Zealand’s response to globalisation and the nation’s poor productivity rating. From the government’s point of view internationalisation was particularly important for New Zealand given its small size and lack of scale. Exports were encouraged too because external competition was thought to help businesses increase productivity levels (Ministry of Economic Development 2006). The ETA built on the approach of the GIF by spelling out clear goals to meet the challenges of globalisation and continued to encourage SME internationalisation and to foster innovation. In fact, 2007 was designated “Export Year” in an effort to encourage New Zealand businesses to engage in the global economy (New Zealand Government 2007).

The target of these new policies were businesses with export potential who were likely to grow, as opposed to the bulk of the small business sector. To address the needs of non high-growth small businesses, the government resorted, once again, to regional development policy, namely the Enterprising Partnerships Fund (EPF). Unlike previous regional policies, however, the overall aim was to develop and implement regional strategies that would improve the business environment and would also increase the number of internationally competitive firms (Ministry of Economic Development 2006). Moreover, this time round regional development policies had shifted away from a job creation focus to transforming
existing firms into more competitive enterprises. The emphasis was firmly on the need to export and to remain competitive in a global economy.

Government agencies also began a more pro-active approach to small business, including through engagement with academic researchers, SME business practitioners and industry associations. The Workplace Productivity Working Group (WPWG) of the Department of Labour illustrates the point. It sought to improve productivity through collaboration between government, industry, firms and unions. Another project to facilitate SME business practices revolved around hearing about the concerns of owner-managers that they spent too much time complying with different government regulations. As a consequence, the government carried out a review of regulations affecting SMEs (Ministry of Economic Development 2007) that led to measures that sought to cut back the amount of red tape small business had to deal with. In another effort to engage with small business stakeholders the Business Capability Partnership (BCP) was established in 2004. The BCP is a private-public partnership aimed at enhancing business and management capability in New Zealand by focusing on policies that will help grow competitive firms (Massey and Ingley 2007).

Not only was the government beginning to access the expertise of others to assist in the development of small business policy, but it also sought to engage leaders in the small business sector to inform the government about their sector’s needs and concerns. To this end it established the Small Business Advisory Group (SBAG) in 2004, which was the beginning of an ongoing dialogue and exchange of views.

While the first tier of SME policy at this time was designed to create globally competitive, productive and innovate firms; the second tier of government policy towards small SMEs
focussed on providing assistance to existing SMEs with a view to addressing market failures (Massey and Ingley 2007; Ministry of Economic Development 2006). By this time, government policy explicitly recognised the importance of building both management and business capability in order to attain business success. While the focus of small business policy has remained on growth, more and more policies have shifted towards encouraging individual management capability development and better business practices. The most recent example of this, leading up to 2008 was the introduction of the R and D tax credit (Ministry of Research Science and Technology 2007). The defining characteristic of these policies was to develop SME competitiveness and foster growth – a point underlined by several informants.

**Conclusion**

The study concludes that during the period 1978 to 2008 the New Zealand government policy towards small business has changed significantly. In the 1978 to 1984 period, small business policy was a component of regional policy initiatives within an overall protectionist economic policy environment. Over this period therefore, small businesses were seen by policy makers as being a largely homogenous sector, and government intervention through business assistance programmes was not targeted.

Between 1984 and 1998, the only specific small business policy was through the BDBs whose role was largely to fund grants to encourage firm growth. There was little targeted assistance and interviews with several informants highlighted the proliferation of poor policy design and evaluation, which meant that these had limited success. The focus of government policy over the period, however, began to change by eliminating much of the protectionism that had stifled growth, though the rise in unemployment led to a reappraisal of the role
SMEs might play both in economic and employment terms. During this period too there was an expanded interest in the emerging international literature and domestic evidence about SME needs.

In marked contrast, by 2008 small business policy had become a recognised and distinct part of economic policy. Consequently, as several informants confirmed, by 2008 small business policy in New Zealand was directed at enhancing management and business capability in order to encourage firm internationalisation and growth.

A key informant noted that from 1984 successive governments used as a starting point the notion that businesses, as opposed to governments, know best about business. This had implications for the formulation of policies to do with small business in two ways: firstly, governments actively liaised with small business stakeholders by transferring to them the task of delivering support services to businesses; and secondly, governments have been reluctant to intervene directly because of the belief that the market will sort things. Notwithstanding this ‘hands-off’ approach, the government has continued its efforts to provide a business environment that facilitates business enterprise development. Efforts by the government have also extended to actively seeking out the views of others in the small business sector, as was the case with the Workplace Productivity Working Group, the Business Capability Partnership and the Small Business Advisory Group.

The changes to SME policy in New Zealand that took place between 1978 and 2008 combine some of the elements identified by both Dennis (2005) and Storey (2005). These underline the point that SME policy in New Zealand has become complex and multifaceted. It is possible to discern elements of both the US and European approach to SME policy
within the latter phases identified in the research. Over the first two phases from 1978-1984 and from 1984-1998, the focus tended to be akin to that which characterised European-style SME policy, though from 1984 onwards there are increasing elements of the US approach. Initially, the emphasis was on protectionism as a driver of policy with government assistance focused on employment retention (and creation). The period after 1984 through at least until 1998 brings in more elements of the US-style ‘competition-focused’ approach, which continues to emphasise broader social and economic objectives (that is employment creation and regional development). The focus on ensuring a level playing field, including through the elimination of tariff protection and industry assistance, served to emphasise that focus on creating the conditions for freer competition.

Significantly, a defining characteristic of the changes and policy making over the period has been the way in which policies, which at times appeared diffuse and lacking coherence, gradually changed to attempt to ensure a tighter focus and clearer objectives. This study has highlighted how in the period from 1998 to 2008 in particular, that focus has informed policy change that is innovative, and distinctly new. Most specifically, that can be seen in the creation of public-private partnerships used in the development and implementation phase of policy delivery. As several informants observed in this context, previous policies had tended to be created largely in a vacuum without reference to business need or trends in international or even domestic research. Further, as some of the informants also confirmed, policies before 1998 in particular, had multiple and often uncoordinated objectives. Since that time, however, the value of more practical and coherent policy making became clear. This drew together government thinking and objectives; domestic and international academic research; and, business views and engagement (in both design and delivery). It is this three pronged approach that characterised the later period considered in this study that can be expected to
help policy makers the most to understand how those three elements working together may improve the sustainability and long term effectiveness of SME policy making in New Zealand.
**Bibliography**


Policies to Promote Entrepreneurship: Context Matters

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Throughout the world, the interest of policy makers in entrepreneurship has grown in recent years, as its contribution to economic development is increasingly recognised and the international evidence base is extended. Whilst policy oriented research has been a feature in some countries for many years, it is now receiving increasing attention by the international research community. This raises the question of what is meant by public policy and how this manifests in different environments. A number of authors have argued the need for entrepreneurship research to recognise the embeddedness of entrepreneurship in specific social contexts. This argument is particularly relevant to a discussion of the role of public policy, since government policies and actions are a key element in social embeddedness. In this context, the paper will compare the nature of entrepreneurship policy, its role and key challenges in three contrasting environments: the UK as an example of a mature market economy; Poland, as an example of a market economy that has emerged from central planning; and China.
Abstract

This paper suggests a millennium approach to entrepreneurship and technology proposals in a competitive borderless world economy based on the analogy with different species in competition for fixed natural resources in business ecological systems. It posits the view that entrepreneurship and technology proposals relocate competitive regeneration growth and conservation laws in a free market economy. Attention is focused on resolving conventional environmental issues and enhancing competitive creative regeneration, productivity incentives, coexistence, growth and conservation. A mathematical faithfulness analysis ecological systems literature based on the Malthusian to Lotka-Volterra models is presented: resulting in precise estimation, monitoring, utilization of biological resources, building a new architecture of entrepreneurship and technology infrastructure, enhanced verification and evaluation of energy economics and sun-disk phenomenon in competitive creative regeneration, conservation and growth consistent with reducing global warming.

Introduction: Resolving the implications of conventional ecosystems environmental entrepreneurship natural resource base accounting for sustainable development issues.

Schumpeter (1949) revisited the Schumpeterian evolving entrepreneurship and technology innovation agenda for sustainable development. In a presentation to participants at the Research Centre in Entrepreneurial History at Harvard University, Schumpeter explicitly recognized that entrepreneurship and technology could evolve into a global collective activity for sustainable development; in the sense that when warranted by the ecological systems environmental entrepreneurship natural resource base income accounting for sustainable development, the state and governments would recognize the importance of entrepreneurship global development goals and successfully carry out the policy commitments to improve living standards of people and human development.

Nonetheless, Schumpeter (1950) expressed the view that we have to accept that ecological systems environmental entrepreneurship natural resource base is the large-scale extractive resources and taxation establishment or unit of control and has come to be the most
powerful engine of economic progress and in particular of the long-run expansion of output... In this respect, perfect competition is not only impossible but inferior and has no title to being set up as a model of ideal efficiency.

However, ever since Schumpeter wrote, at stake was the prospect of economists and entrepreneurs to have to elaborate on a theory of competition in a free market economy and the properties of stability and general equilibrium systems in which the dominant market organizational design of an enterprise is viewed as an imperfect market, and a deviation from ideal perfect competition. From market-oriented historical perspectives, Schumpeter thought the specification of a «model of ideal efficiency», that is to say, environmental natural resource base efficient allocation and use of natural resources and market networking is problematic because according to him the «ideal» is continually changing as new structures of economic organizations bring new institutions, firms, industries, and scale economies to international dominance. Hence, institutional and ecosystems environmental natural resource base arrangements that previously yielded «ideal» economic and entrepreneurial outcomes became victims of creative destruction.

As Schumpeter studied the evolution of capitalism, he perceived the laws of entropy, energy and limitations of the physical world: not only of individualistic greed and selfish genes, but also of static mind, memory and theories, quantitative and qualitative methods. The Schumpeterian evolving entrepreneurship and technology innovation agenda is reconsidered by revisiting its transformation in capitalist design and redesign of organization and its impact on ecological systems environmental natural resource base income accounting for sustainable development in developing free markets, global economies, emerging industrial free market economies and industrialized free market economies in the last half of the nineteenth century; and the UN 2000-2015 Tools, Targets and Implementation period of the UN Millennium Development Goals (MDGs).
Schumpeter (1954) is addicted to a rear-view-mirror perspective in the history of economic analysis of the transformation in the redesign of entrepreneurship and technology organizational agenda. His perspective in entrepreneurial transformation and capitalist redesign of organization is limited in scope. This is understandable because the design of entrepreneurship creative regeneration and transformation of democratic economic and functional social welfare systems are rooted in the world of the human mind and memory: in the elements of time, space, causality, pleasure, and pain as starting points in spiritual entrepreneurship and technology development of cultural and moral values. For many entrepreneurial historians, the Ancient African Nile Valley Entrepreneurship/Technology Civilisations is a baffling economic-planning and development of sustainability phenomena. Schumpeter (1954) was clearly knowledgeable. In his economic analysis in wealth-building in historical perspectives on issues of Graeco-Roman-Judaeo-Christian moral values and ethical indebtedness, he paid tribute to the Ancient Nubian Egypt Nile Valley Civilisation B.C. 5000, as the dominant morality woven into the fabric of Western Civilisation and powerfully impacting the world in economic development and wealth-creating capital transformation and the design of business ecologicalsystems organization for millennia.

In Casson (1972) and the Ancient Nubian Scribe Papyri, Menna B.C.1400 and King Mena B.C. 4400, the first Nubian Egyptian Nile Valley Pharaoh designed the first human union of regions organization for economic development planning and programming of large-scale projects for the transformation and design of Wealth Creation and Regeneration in Entrepreneurship moral-value-loaded Maxims and Precepts of the law: Hall of « Maat » entrepreneurship that formed the basis of moral values of the law of equity, governance, democracy, stability and development of sustainability. Hence, the African Heritage in Wealth Creation and Regeneration Entrepreneurship and Technology contexture, in business ecologicalsystems natural resource base design of organization, has stood the test of time in
millennia of development of sustainability in virtues of an environmentally friendly physical process of non-exploitative proprietary and appropriation-driven depletion and degradation of ecological systems.

Rather, it is deeply rooted in the techno-entrepreneurship moral value-loaded precepts at the « Maati Hall » of legal accountability, balance of law, equity, democracy, truth, governance, human rights and freedom of mutual inter-dependence, integrity, spiritual righteousness, straightness, justice, trust, fair-share, uprightness in value judgements, the rule of law, social welfare, security and environmental resource munificent accounting for the development of sustainability in entrepreneurship and technology best practice in the world of the human mind endowed with memory as the starting point for knowledge and values. In order to build patterns of entrepreneurial thoughts and their quantitative and qualitative retrieval, in the sustainable development of entrepreneurship and technology innovation, in time, space, cause and effect; the ancient entrepreneurship transformation in wealth creation and self-reproduction powerfully and lastingly wove into the fabric of human civilization and world entrepreneurship and technology invention, innovation and diffusion of innovation a legacy in: hieroglyphs and writing, papyrus rolls, Small and Medium Sized Enterprises (SMEs), agricultural, water and soil science, and technology best practice in the Elysian Agricultural Fields of Hetep Nile Valley, environmental entrepreneurship planning and programming, biotechnology architecture, social utilities infrastructure, structural engineering, medical practice, medical and biomedical science, royal gold ornaments and gold cowries currency, evolving trade, SMEs and market structure of taxation and extractive resources. Arts and crafts, music, development of skills in mathematical science of techno-entrepreneurship evaluation of the universe: heavenly bodies, physical world, the biodiversity world and the world of the spiritual mind and memory dynamic-self organizing systems in time, space, cause and effect. This is African Entrepreneurship Wealth Creation and
However, the contribution and legacy of Schumpeterian entrepreneurship and technology innovation analysis is its impact on social and public choice theory and policy of the transformation in capitalist organization in the nineteenth and twentieth century particularly in his work on Capitalism, Socialism and Democracy. Also, his work on evolutionary economics is commonly seen in rigorous mathematical foundations, and as in every economic capitalist transformation process there appears to be a gap between actual and potential gross domestic product (GDP) economic growth in the Schumpeterian construct; both in quantitative and qualitative terms, partly because natural resource depletion and degradation are ignored. Also, GDP growth rate is often seen and used inappropriately as an indicator of economic welfare without an explanation of the shortcoming for the purpose. The process ignores the depletion of valuable natural resources and confuses the sale of commercially marketable natural assets with the generation of income. Moreover, the concept of welfare is much broader than a monetary measure of income. It covers many aspects and dimensions of subjective wellbeing other than those that involve market transactions or that can be measured in monetary terms.

However, in the context of Lazonic (1990) on the role of entrepreneurship and technology innovation in Schumpeterian history of transformation in capitalist organizational design in the last half of the nineteenth and early twentieth century; and the year 2000 on the economic impact of Schumpeterian entrepreneurship in creative destruction there are lessons learned in four industrial revolutions in *ecological systems* environmental natural resource base accounting in the broad public-private effort for sustainable development.

Consequently, we identify the sources of Schumpeterian entrepreneurial competitive advantage in the rise to international economic entrepreneurship and technology dominance of

It is worthwhile mentioning that the entrepreneurial history of British, American and Japanese transformation in capitalist organizational design is a legacy of the Graeco-Roman-Christian Empire of economic and administrative entrepreneurship and pollution-driven proprietary capitalism during its occupation of the Nubian Egyptian Nile Valley at Alexandria B.C. 200. Alexandria became the gate-way to the old cross-road and Silk Road entrepreneurship of the dependencies of the Roman Empire in the West from (Britannia) Roman Britain and Middle East Asia and Far East Asia. Roman economic and administrative entrepreneurial organizational design was both efficient and ruthless in exploitation. As an occupying power, the Romans looted, milked and controlled the free-market Nubian Egyptian Economy mercilessly through designated individual proprietary environmental pollution and entrepreneurial capitalist agents. The gap between the rulers and the ruled grew wider with the ruled paying for cost of pollution. The Roman Emperor appointed Agricola, an Elysian Agricultural Field environmental pollution capitalist agent as Governor of Britannia (Roman Britain).
In Casson (1972), Napoleon launched the conquest of the Egyptian Nile Valley in 1798. He was accompanied by a small group of loyal servants dedicated to the study of the African Nile Valley. This led to the discovery of the ancient Nubian Egyptian Rosetta Stone fragment inscribed both in Hieroglyphics, Demotic script and Greek which provided the clue to the ancient history of economic analysis of entrepreneurship and technology innovation and evolution in the Ancient Nile Valley. Its bilingual text provided Jean-François Champollion in 1822 the clue to read and translate the hieroglyphs, pictographs and thereby unlock the conservative cultural and moral values of Ancient Nubian Egyptian Nile Valley Entrepreneurial Civilisation of Creative Regeneration. This led to the rage of amassing Ancient African Nubian Egyptian Nile Valley antiquities by Western European and Eurasian mindless entrepreneur predators. The African Heritage of the Nubian Egyptian Pharaohs was expropriated, appropriated and exploited mercilessly: entrepreneurial and technological innovative engineering and architectural fragments, statues, mummies, papyri rolls on medical, agricultural science, ecological systems environment natural resource accounting, astronomy, mathematical science of time, space and causality and the structure of the physical, biological and spiritual universe, tomb furnishings, copper irons, gold jewelleries, gold cowries currency, precious stones, arts and crafts were carried off wholesale to enrich West-East Museums and proprietary entrepreneurial collections. In the proprietary entrepreneurship and SMEs seller’s free market economy, the methods used by East-West administrative capitalist entrepreneurial predators were crude and savage.

In 1858 the administrative proprietary entrepreneurship consular agent of Napoleon and the 1860 Suez Canal entrepreneur in creative destruction(1) Ferdinand de Lesseps(2) appointed Auguste Mariette as administrative proprietary agent conservator in organized plundering of Ancient Nile Valley antiquities. Mariette and Gaston Maspero excavated important tombs and monumental treasures for profit. In 1862 the first Japanese Nile Valley
and Old Silk Road Samurai proprietary entrepreneurship expedition of thirty-six entrepreneurs, headed by the proprietary entrepreneurship relic-hunting agent, Takeuchi Yasumori, travelled from Suez to Cairo in the seller’s looting market of antiquities and papyri rolls of science and technology innovation. They filed a detailed record of private collections and a photograph of mono-clad Samurai at the Sphinx. These are preserved in the Japanese National Diet Library.

In 1880, the British administrative and proprietary entrepreneur Egyptologist agent, William Matthew Flinders Petrie succeeded the French. He put in place the procedure in the transformation of capitalist organization in entrepreneurship archaeological excavation and the preservation of treasures and papyri rolls for entrepreneurship innovation in research and development (R&D). Thus, British entrepreneurship, technology, research and development in the Nile Valley treasures, papyri rolls and Graeco-Roman colonial economic proprietary-agent administrative capitalism have formed the basis of institutional and international dominance. Secondly, this was followed by the American Revolution in proprietary entrepreneurship R&D of individualism in a new physical world and world of life that built the basis for institutional and international dominance in self-responsibility, principles of free and intense competition and equality of opportunity. This has led to the dynamics of networking managerial capitalism in nothing succeeds like success in environmental exploitation, resource depletion, and degradation control and pollution accountability. Thirdly, this is followed by Japanese collective contextualism in managerial transformation of capitalist organization. This involves the potent economic rule of fair share proprietary entrepreneurial attempts to inject entrepreneurship research and development into the collectiveness of interests in mass production of consumer durables in vertically related capital good industries under managerial capitalism. This basic institution of collective capitalism is proprietary contextualism in which the rule of group fair share is dominant in the
planned coordination of group activities including setting up new vertically related enterprises as the need arises. This has made Japan a strategic collaboration and collectivity group matrix of entrepreneurs that has dominant institutional and international economic power to lead the third Industrial Revolution and the development of tools for environmental pollution management. And fourthly, we have the Chinese A.D. 2000 dynamic GDP economic growth miracle founded on the Chinese Revolution 1911-1912 on Wealth Creation and Regeneration in collective and collaborative entrepreneurship and technology development based on the contextualism cultural matrix of high output and low cost input technical and efficient skills. This cultural collaborative matrix of entrepreneurs is ideal for integration into vertically related capital goods and consumer goods industries in collective collaboration and competitive productive organizations. The result is unity and harmony in « Memorandum of Understanding Value Judgements »: growth, competition, environmental pollution and resource accounting, collective welfare, equity or justice, security, efficiency, sustainability, stability, freedom and market mechanism of collective collaboration in managerial capitalism.

The transformation in capitalist entrepreneurship organization in Wealth Creation and Regeneration has made China the dominant global economic and institutional power that has taken the lead in the Fourth Industrial Revolution; and working effectively on its strategy in Biodiversity and the Conference of the Parties (COP) Protocols in achieving the targets of the UN Millennium Development Goals (MDGs) 2015.

**Objective: Redesign of Transformation in Patterns of Entrepreneurship Organization: The Business Ecologicalsystems Regeneration Approach.**

Arrow (1987) defines the design or redesign of an organization as a vehicle for exploiting the potentials of the market mechanism and for achieving alternative methods of efficient allocation of resources (by such means as the internal structure SMEs, government, entrepreneurship and invisible institutions of trust and ethics) where the market fails or does not exist.
Arrow perceives a modern organization as a group of individuals seeking to achieve some common goals or to maximize an objective function. Each member has objectives of his own, in general not coincident with those of the organization. Each member also has some range of decisions to make within limits set partly by the environment external to the organization and partly by the decisions of the other members. Finally, some but not all observations about the workings of the organization and about the external world is communicated form one member to the other.

However, he contends that an organization may be as broad and all encompassing as the entire economic (entrepreneurial) system. If the entire economy is thought of as a single organization one is led naturally to think of the price system as one of the major devices for coordinating different (global and competitive) economic activities. A great deal of effort has been made by economists in clarifying the moral and cultural virtues and limitations of patterns of organization.

In this study, our vision of the redesign of global patterns of entrepreneurship organization is our focus on Business Ecological Systems Creative Regeneration in the development of biodiversity sustainability or what is commonly known as public-private policy effort to reduce global climate change and a sustainable environment. The focus is on lessons learned in entrepreneurship information channels, communication, structure, moral, codes and values in the physical biological life and spiritual worlds. The African Heritage of monotheistic RaAusaresianism of the After Life Wealth Building dichotomous persons, Western/Middle East Asian monotheistic Judaeo-Christian-Islam proprietary dichotomous persons and East Asian Unitarian Confucianism, collectivity non-dichotomous-Taoism-Shintoism non-dichotomous persons suited for integration into productive organization.

The focus in his cultural organizational matrix is the crucial role of the entrepreneur. He is defined as a moral person who, on experiencing the fundamental knowledge and
uncertainty-bearing and expectations of the market economy, commits himself to a certain
vision of decision making and discovery; and who is able to interpret and access the structure
and range of impact of symmetric an asymmetric on-the-spot information and communication
of that discovery; and based on that information and communication of discovery is able to
create a new regenerative context within the market or organization. This is the context of
Creative Regeneration in a competitive market economy in the development of business from
ecology rather than ecological businesses as recommended in the UN Millennium
Development Strategy (MDGs 2000) that empowers member countries to explicitly build
between 2003-2004 their own Millennium Development Strategy Papers targeting the UN
Millennium Development Goals (MDGs 2015). The strategies, goals and targets are
inadequate.

The strategies, goals and targets to ensure environmental sustainability suggest that
this could be a revised version of the Convention on Biodiversity signed at the Earth Summit
in 1992 in Rio de Janeiro, Brazil which explicitly and suitably incorporates the MDGs. More
recently and in the context of the Earth Summit and COP protocols, there has been a lot of
talking about carbon environmental pollution waste sinks, efforts to reduce global emissions
of green house gases and a market economy that draws on renewable energy sources to reduce
to reduce global warming and climate change and environmental accounting for sustainable
development.

It is argued that human kind or the human world of life is dependent on
ecological systems environmental natural resource base for energy. It is reliably estimated that
petroleum resources will be exhausted by say within sixty years; natural gas by, say within
one hundred and fifty years and hydrates within four hundred years at the present rate of
resource depletion, degradation and depreciation. It is therefore highly likely that with current
trends in proprietary entrepreneurship natural resource exploitation, human life will not be
sustained on physical Planet Earth by the year 2500 A.D. In the circumstances, we propose entrepreneurship and technology research and development focused on business ecological systems entrepreneurship in the development of sustainability. We will also propose growth and development, and entrepreneurship technological innovation laws appropriate for the millennium.

**Research Methodology**

In 1972, Arrow was awarded the fourth Nobel Memorial Prize in Economic Science. The prize was awarded for his pioneering contribution to general economic equilibrium theory and welfare theory. It was argued that the progress in economic sciences has led to a profound transformation of the general equilibrium theory. Arrow used modern mathematical methods to study the properties of competitive general equilibrium systems: Arrow thereby formed the basis for a radical re-formulation of previous theory. Together with Debreu, they were able to demonstrate in a mathematically stringent manner, the conditions which must be fulfilled for the existence of equilibrium.

In this study, we consider an approach in the demonstration of competition whereby only those enterprises and entrepreneurs who are able to compete most strongly and diversify most rapidly in a creative reproduction system of the market process; will continue to survive in a market ecological system environmental natural resource base. The underlying rationale is that of competitive regeneration which creates a stable coexistence of two or more competitors making their livelihood in identical ways. By this rationale, we derive some insight as to why entrepreneurship should be characterised by some distinct feature in product competition in creative differentiation and ecological systems resource regeneration and conservation. Hence entrepreneurship and technology patterns of specialisation in creative regeneration is considered merely as nothing more than an essential strategy to the survival of business ecological systems natural resource base coexistence with a large number of other
enterprises in industry *ecologicalsystems* creative regeneration. And as Marshall (1920) and others have emphasized, variety (creative) which is the natural resource pattern of entrepreneurship specialisation (resource regeneration) is the main spring of economic progress (development of sustainability) in the context of transformation in capitalist organizational design. In retrospect, economic regeneration is contingent upon the competitive process of creative regeneration process of selecting between various competing technological and redesign of organizational patterns.

In what follows in this study, the concept of competition as a powerful force for diversity in a free-market economy is revisited. We posit some interesting predictions regarding the practical limits to competitive similarity in creative destruction in *ecologicalsystems* environmental businesses resource base. The limits to similarity in competitive creative destruction is the extent to which the practical limits are exactly reached in a competitive system of optimal path depletion, degradation and depreciation of environmental resource accounting for sustainable development.

In order to present the market analysis of the business *ecologicalsystems* natural resource base characterized by entrepreneurship and technology patterns of differentiated products which incorporate competitive optimum growth paths in creative regeneration, an economically *ecologicalsystems* interpretable model of optimum growth paths of laws of development of sustainability are identified and shown to be sufficient for the analysis to proceed along lines identified by May (1973) and the UNCED Earth Summit (1992) Convention on Biological Diversity in the theoretical ecology literature and the growing global concern about biodiversity loss; and its transformation from a scientific issue to a political economic development issue of sustainability.

The business *ecologicalsystems* entrepreneurship and technology model presented in this study is closely related to the UN Convention on Biological Diversity and UNEP (1972,
1982) methodological guidelines on entrepreneurship *ecologicalsystems* environmental natural resource accounting. This is based on a close analogy to May’s analysis of biodiversity as the totality of genes, species and *ecologicalsystems* environmental natural resource base competition. Here, entrepreneurs compete for environmental natural resource base and share market demand. Also, their subsequent success is determined by their pattern and transformation in resource share demand. In the survival entrepreneurship *ecologicalsystems* market demand model, each entrepreneur is defined by the inherited entrepreneurship and technology pattern of transformation in capitalist organizational design of creative regeneration process for the development of sustainability.

**The model of Business Ecological systems Entrepreneurship for the Development of Sustainability.**

Schumpeter maintains that the basic force motivating capitalism and enabling the continuous operation of its system is the available natural resources, new production methods (including new transportation methods), new markets, new industrial and technological structures all of which are created by the entrepreneur in a new context of constructive-creative destruction. So be it.

Now, let us consider a new pattern and context in techno-entrepreneurship transformation in capitalist redesign of organization in a continuous operation of its system as an approach to competitive business *ecologicalsystems* environmental natural resource base in an evolution and adaptability process of creative regeneration. By definition, the new context and pattern is the ability to create a new market and technology infrastructure with the competitive business *ecologicalsystems* natural resource base. The ecologicalsystems also consists of the total heritable variations caused by the presence of species, genes or units of hereditary information which organisms can transmit to their offspring from one generation to the other in different climatic and vegetation zones of the earth: in the ground and atmosphere. In the human *ecologicalsystems*, biotechno-entrepreneurship makes it possible
for soils, vegetation, plants and animals, micro-organisms and the atmosphere to act as life support system in entrepreneurship creative regeneration of the growth law of all living things in the physical and biodiversity world of life. Thus the entrepreneurship and technology business ecosystems demand and best practice continuum is flat.

Now, consider an idealized entrepreneurial ecological systems transformation in capitalist redesign of organization in a geological, climatic and biological context that constitutes the world of evolution and adaptability governed by genes of species, the growth rate and cyclical poverty of species through biological reproduction in coexistence with other species in a prey-predator relationship; Andrew and Mcleone (1976); and Hoppensteadt (1975). Thus we cannot escape the laws that govern orders issued by our genes to our memory that endows us with a mind. As a result, we have entrepreneurship ecological systems self-organization in time, space, cause and effect. Understandably, mind and memory of entrepreneurship ecological systems self-organization is the starting point for values and a cycle of stable thought patterns created that emerges from and returns to memory in a combined process of synthesis and analysis that gives rise to logicality, concepts, ideas and contexts in entrepreneurship ecological systems wealth creative regeneration. This African Entrepreneurial Heritage of best practice in synthesis and analysis of natural resource utilization for the development of sustainability in building a new energy and social infrastructure.

Let us now consider models consisting of a given population of entrepreneurs in a business ecological system of species, genes and examine its growth rate. An attempt is made to present four models in their order of increasing mathematical sophistication and faithfulness to the natural law of creative regeneration phenomena:

- The Malthusian Model
- The Verhulst-Pearl Model
- Two species in competition
- The Lotka-Volterra Prey-Predator Model.
The argument developed by Malthus' (1798) theory of population in the ecology systems environmental economy is related to the Malthusian Law of population. Let $x(t)$ be the population density of a single species at time $t$ and let $b$ be the birth rate of an individual of the population, and $d$ the death rate of an individual of the population. The Malthusian equation may be formulated as a law requiring the quantitative relationship which describes the process by which the population density $x(t)$ increases with time $t$. Logically, this leads us intuitively to postulate the Growth Law as the rate of growth of population density being the difference between the birth rate and the death rate:

$$x(t) = (b - d)x = rx \quad \text{where} \quad r = (b - d)$$

which is the innate capacity of the population to increase by the quantitative relationship:

Intuitively, at time $t$, $bx$ individuals enter the population and $dx$ individuals leave it.

The solution of the Malthusian Growth Model has been tested by Tanyi (1978) for its faithfulness to reality. Understandably we want to know how far the model represents the business ecological systems entrepreneurial context and pattern of the environmental natural resource base accounting phenomenon. How far is development of sustainability, stable systems and stable equilibrium system and control consistent with predictions and realisation?

A stable system is one whose state space functions are always bounded. Stabilization implies maintaining a stable state. To sustain is to uphold and support in a stable state, while control is our ability to steer a given system and this requires our capability to observe the system through some form of measurement. Realisation is another basic objective and deals with the question of how a system can actually be constructed in mathematical terms.

The linkages between synthesis and analysis of these goals would help us achieve the mathematical structures of self-organization of competitive business ecological systems entrepreneurship and technology innovation. Accordingly, business ecological systems disturbed from its competitive equilibrium position tends to return to it in the long run to give
a strict definition of the linkages to stability we shall confine ourselves to a deterministic model governed by the capacity of self-organizational systems in business ecological systems entrepreneurship. Therefore, let the capacity of the Self-Organization System (SOS) be:

\[ *y(t) = f(y), y \in \mathbb{R}^* \]

The zeros of the vector fields \( f \) correspond to the competitive equilibrium position of the system (SOS); because they determine points of zero velocity, \( y^* = 0 \). Accordingly, we introduce a strict definition of the Lyapunov solution. Let \( \varphi(t) \) be a solution of (SOS) with initial values \( \varphi(t_0) \).

Thus \( \varphi(t) \) is Lyapunov stable linkages, if and only if and only if:

For every \( \epsilon > 0 \), there exists \( \delta(t) > 0 \) subject to any other solution of \( \alpha(t) \) of (SOS) with initial values \( u(t_0) \); \( |u(t_0) - \varphi(t_0)| < \delta(t) = |u(t) - \varphi(t)| < \epsilon \), for every \( t \geq t_0 \). As consequence, the competitive equilibrium point \( \varphi_0 \) of (SOS) has linkages stability if and only if for every \( \epsilon > 0 \), there exists \( \delta(t) > 0 \) subject to \( |u(t_0) - \varphi(t_0)| < \delta(t) = |u(t) - \varphi(t)| < \epsilon \), for every \( t \geq t_0 \).

Thus by strict definition of the Lyapunov solution \( \varphi(t) \) is asymptotically stable in linkages; if and only if it is stable and for any other solution \( u(t) \) and for every \( \delta > 0 \),

\[ |u(t_0) - \varphi(t_0)| < \delta \rightarrow \lim_{t \to \infty} |u(t) - \varphi(t)| = 0 \]

We can now evaluate the Malthusian model (1) for \( r \) constant \( x(t) = e^{rt}, x_0 = x(0) \) and in general for time dependent \( r \), \( x(t) = \exp \int r(t) \, dt \) for \( r > 0 \), \( x \to \infty \) as \( t \to \infty \) for \( r \equiv 0 \), \( x(t) = \text{constant} = x_0 \). Hence the value \( r_0 = 0 \) thus represents an unstable competitive equilibrium point of the population of the ecological systems. It was this behaviour that led T. R. Malthus in 1798 to predict that the human race could only persist if periods of exponential growth were followed by a period of plague and famine.
This unreal situation is due to the fact that the Malthusian model is applicable only for very short periods of the life of the biological organism considered. We can therefore conclude that the Malthusian model is based on creative destruction and it is not very faithful.

Secondly, we examine a self-regulatory model due to Verhulst(1838) and Pearl(1927). The Verhulst-Pearl Model modifies the Malthusian model by means of two additional postulates:

- The death rate is proportional to the population density. That is to say there exists a constant \( \alpha \) subject to \( d = \alpha x(t) \)
- The birth rate is constant. That is to say, \( b = \text{constant} \).

Consequently, the Malthusian growth equation (1) becomes;

\[
\frac{dx}{dt} = r_0 (1 - x/k) x \tag{2}
\]

where \( r_0 = b \) and \( k = r_0/\alpha \).

The death rate is proportional to the population density. That is to say there exists a constant \( \alpha \) subject to \( d = \alpha x(t) \) and creative regeneration for the obvious reason that for \( k = x \), \( dx/dt = 0 \).

Now, if we introduce the change of scale, \( x/k = z \) and \( r.t = 1 \),

then (2) transforms to the dimensionless form;

\[
\frac{dz}{dt} = (1 - z)z \tag{3}
\]

and has the solution,

\[
z(t) = \frac{1}{1 + c^{-t}} \tag{4}
\]

where \( c = z(o)^{-t} - 1 \) for \( c = 0 \) and \( z(t) = 1 \).

That is to say \( x = k \), and this implies that for \( c = 0 \), we are at the maximum carrying capacity of the ecological systems environment natural resource base. An evaluation of solution (4) shows that the competitive equilibrium configuration \( z(t) = 1 \) is stable and sustainable.

Thirdly, let us consider two entrepreneurial species in competition; by changing the time and causality scale effect, the Verhulst-Pearl equation (2) may be written as:
\[ z' = z(1 - \alpha z), \] where \( 1/\alpha \) is the carrying capacity of the ecological systems and \( z \) the consumer population density of two species. In isolation their growth rates are:

\[ q' = q(1 - bz - dq) \quad (5) \]

In competition, we postulate the growth equation;

\[ z' = z (1 - \alpha z - cq) \text{ and } q' = q(1 - bz - dq) \quad (6) \]

where \( c \) and \( b \) are coefficients that measure the degree of entrepreneurial creative regeneration and creative destruction interactions in the regenerative business ecological systems and the destructive ecological systems business environment. Thus, the equilibrium position of the ecological systems in (6) is the interaction of creative regeneration and creative destruction carrying capacity lines of entrepreneurship:

\[ \text{LE1: } (z/\alpha - 1) + q/(c) = 1 \quad \text{and} \quad \text{LE2: } (z/b - 1) + q/(d - 1) = 1. \]

Thus the stability synthesis and analysis of equilibrium position in (6) shows that \( z \) increases if and only if \( \alpha z + cq < 1 \), and decreases if and only if \( \alpha z + cq > 1 \). And similarly, \( q \) increases if and only if \( bz + dq < 1 \) and decreases if and only if \( bz + dq > 1 \). Alternatively, ecological systems (6) may be written in this form:

\[ z' = \alpha(t,z)z + \beta zq, \quad \text{and} \quad q' = \lambda(t,q) q + \mu zq \quad (7) \]

where \( \alpha, \lambda \) are the net growth rates of the species \( z \) and \( q \) in isolation; as shown in equation (5).

Fourthly, the formulation in (7), permits us to relate (6) to the original prey-predator model of Lotka and Volterra; with notation:

\[ \text{N}_1 = \text{population density of the predator species in creative destruction of the ecological systems environmental resource base accounting for sustainable development.} \]

\[ \text{N}_2 = \text{population density of the prey species creative regeneration for the development of sustainability.} \]

\[ \alpha_1 = \text{death rate (per individual) of the predator species.} \]

\[ \alpha_2 = \text{birth rate (per individual) of the prey species.} \]
By intuition, we are led to the following hypotheses:

\( H_1 \) : The growth rate of the predator species depends on the density of the preys. That is to say, there exists \( \lambda_1 \) subject to \( bN_1 = \lambda_1 N_2 \)

Here, \( bN \) is the birth rate (per individual) of the predator species.

\( H_2 \) : The mortality of the prey species depends on the population density of the predators. Thus, there exists \( \lambda_2 \) subject to \( dN_2 = \lambda_2 N_1 \).

Here, \( dN_2 \) is the death rate per individual of the prey species.

Consequently, it follows directly from the hypotheses \( H_1 \) and \( H_2 \) that

\[
\frac{dN_1}{dt} = a_1 N_1 + \lambda_1 N_1 N_2, \quad \frac{dN_2}{dt} = a_2 N_2 + \lambda_2 N_1 N_2 \quad (8)
\]

This self-organized mathematically faithful *ecological systems* entrepreneurship system is known as the Lotka-Volterra prey – predator model. An evaluation of the model shows that in the absence of the predator (creative destruction) entrepreneur, the evolution of the business ecological systems is Malthusian in competitive creative regeneration entrepreneurship and technology best practice. The system also describes a Host – Parasite biological system.

We can solve the model to demonstrate that system (8) is an equilibrium solution and consequently develop the law of conservation in business ecological systems entrepreneurship and technology in creative regeneration of environmental natural resource base accounting for the development of sustainability.

**Results**

The results and argument presented is based on a close analogy with problems of *ecological systems* social, biotechnological proposals and techno-entrepreneurship development dynamics and economic competition in mathematical modelling of biological species competing in the environments for fixed resources. Here, it is contended that an entrepreneur trying to create redesign of organization, needs on-the-spot information that
suggests to him the structural information from which he can grasp and understand business ecological systems globalisation, industry and technology proposals relocation, production and competition for fixed natural resources and market share. Thus, each entrepreneur and technology proposals specific evolution and adaptation within the market structure is defined by a growth, conservation and reproduction law. A growth and conservation model of structures of ecological systems of entrepreneurship and technology proposals is considered.

**Discussion and Conclusions**

A key distinguishing factor of business *ecological systems* approach to entrepreneurship and technology proposals in a competitive borderless world economy is in resolving conventional issues of environmental problems of green house gases effect, climate change, waste crises, racial, poverty, slavery, cold war, population drugs natural resource accounting, definition of innovation and the Schumpeterian market entry and exit in competitive creative destruction for sustainable development. A business *ecological system* approach in entrepreneurship decisions gives a balanced judgement of development of sustainability in competitive creative regeneration or reproduction, productivity, incentives, coexistence, evolution and adaptation of technology proposals to growth and conservation law and a flexible population, cold war, poverty, slavery, racial, drug addiction and climate change reduction. This will improve our understanding of the estimation, monitoring and analysis of natural resources impact and appropriate technological proposals for the millennium. It will improve incentives to public-private effort to reduce greenhouse gases emissions global warming and enhance renewable energy sources through biological and sun disk-studies concerned with the utilization of biotechnological and the phenomenon of the economic physics of the sun-disk resources in building a new infrastructure for development of sustainability. This enhances the evaluation, verification and understanding of *ecological systems* entrepreneurship and technology proposals in millennium COP protocols.
References


Understanding Coopetitive Relationships between Subcontracting SMEs in Aeronautic and Space Industry

By David Salvetat\(^1\) and Mickaël L.R Géraudel

Abstract

Small and Medium Size Enterprises (SMEs) are often engaged in cooperative relationships with competitors because of environment constraints. Based on a sample of 40 aeronautic and aerospace companies located in Europe, we try to understand different types of relationships of coopetition for SMEs in a competitive industry. The first form of coopetition is “endogenous coopetition”. In this case, SMEs are actors of coopetition. They choose to pool their efforts between SMEs to face global companies. The second strategy is “exogenous coopetition”. In this case SMEs are agents of the coopetition. Actors from higher ranks (prime-contractors) oblige SMEs to cooperate with them or with others subcontractors.

Introduction

Scholars argue that there is coopetition between international groups but they do not take into account the different forms that coopetitive relationships between Small and Medium Sized Enterprises (SMEs) can take. However, for some SMEs, strategic alliances are critical

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(Golden and Dollinger, 1993; MacGregor, 2004; Parise and Casher, 2003) because they are embedded in a social structure which constrains these small companies to cooperate with their competitors (Lechner and Leyronas, 2009). SMEs need to collude with other SME to be more efficient (Lu and Beamish, 2001). In some cases, cooperation is established with competitors. When competition and cooperation occur simultaneously, we have coopetitive situations. For SMEs involved in this process, coopetition leads to generic outputs: reducing costs, increased turnover, etc. While the outputs of cooperation are well known, it is more difficult to describe the different types of coopetitive relationships between SMEs. For example: are they obliged to cooperate with their competitors? Did they have a free choice of partners?

The goal of this article is to show the different types of coopetitive relationships between subcontracting SME in the European aeronautic and aerospace industries, and especially in the “Aerospace Valley” district. Based on grounded theory, we conducted 58 interviews in 40 companies and economic institutions to model coopetitive relationships between SMEs in Aerospace Valley.

Our results show that there is endogenous coopetition, where SMEs are engaged in the global market to fight against large firms or to defend their own niche market. This is a deliberate strategy. The second type of coopetition has exogenous factor as determinants. The prime contractors oblige SMEs to cooperate with their competitors to obtain markets. The prime contractors seek economies of scale or research into innovation.

In a first part of this paper, we provide a brief overview of the literature about coopetition for SMEs. In a second part, we present the sample and develop the methodology used in this research, grounded theory. Lastly, we present our main results.
1. Coopetition, a paradoxical behaviour

Coopetition is a combination of cooperative and competitive behaviour between rivals (Nalebuff and Brandenburger, 1995; Bengtsson and Kock, 2000; Gulati et al., 2000). The concept of coopetition is thus an essentially plural one (Dagnino and Padula, 2002) and it is useful to distinguish between the various forms that it takes (Walley, 2007). Although often presented as opposites, competition and cooperation may reveal serious dysfunctions when they are approached in an alternative and non-simultaneous manner (Bresser, 1988). That is the reason why coopetition is quite different from strategic alliances. The combination of the two types of behaviour enables both the development of an important advantage (Bengtsson and Kock, 2000) and the management of tensions generated by these two strategic postures (Clarke-Hill et al., 2003).

Nalebuff and Brandenburger (1995) use game theory to model coopetition in order to propose a balance between the realization of individual and collective interests. Lado et al. (1997) utilize game theory, socio-economic approaches and the resource-based view (RBV) in order to create a typology of relationships, in the context of the search for economic rent. Bengtsson and Kock (2000) use social network analysis and the RBV to identify coopetition, dyadic and paradoxical relationships, which are simultaneously cooperative and competitive, but relate to different activities.

2. Outputs of coopetition

Cooperating with competitors leads to specific outputs. Adopting both cooperative and competitive behaviour simultaneously has various effects, including the stimulation of knowledge, acquisition of information and development of confidence (Lado et al., 1997). Sulej et al. (2001), for example, observe that there has been an increasing use of strategic
alliances as a mechanism for growth by SMEs, especially in innovative, technology-based industries.

Coopetition thus aims at generating synergies and finding resources that are complementary or similar. The intention is to establish an overall network of all partners in order to tap into their knowledge, for mutual benefit (Me Chirgui, 2005).

Accordingly, cooperation becomes a means of improving competitiveness and searching for resources and complementary competences (Bengtsson and Kock, 2000). Within a business ecosystem (Moore, 1996), a dominant firm can choose coopetitive behaviour in order to supplement its portfolio of resources. Moreover, many actors play the role of an intermediary, by proposing business integration between actors. A broker links the companies within a business network (Miles and Snow, 1986). Such a broker is also an architect (initiating and building the network), a moderator (coordinating and leading the network) and a facilitator, ensuring the sustainability of the network. The actors specifically seek cooperation in order to form and operate a network.

The theory of transaction costs (Williamson, 1985) indicates that there is generally a strong propensity to compete in industry. Competition is beneficial for a market, while cooperation tends to be perceived as market disequilibrium (Quintana-Garcia and Benavides-Velasco, 2004). Thus, competition is the only means of achieving strong performance and market equilibrium. However, the best partner may in fact be a competitor (Deming, 1993). Cooperation increases competitiveness (Lado et al., 1997) and opportunistic behaviour can coexist with apparently contradictory values such as confidence. Thus, opportunistic behaviour can be exacerbated by the adoption of coopetitive behaviour. The objective of collecting information entails risks of information loss (Oxley and Sampson, 2004) and knowledge
exploitation by other partners. Collecting information and developing key competences can be one of the main motivations for engaging in coopetition.

Strategies of coopetition are implemented in order to improve performance. They are located at the crossroads between competitive advantage and the mobilization of key competences, with the aim of improving the offering to customers. In fact, they specifically seek collaborative advantage (Miles and Snow, 1986; Thorelli, 1986).

3. SME and types of coopetition

Are there specific coopetitive relationships between SMEs? If we accept that SMEs need to access resources, then coopetition is a specific process whereby companies can achieve that. Indeed, according to Lechner et leyronas (2009) coopetition is positively associated with small-business group formation. Managers see competitors as potential resources to be more successful in business (Lechner et Dowling, 2003) and to face environment risks. For Lee et al. (1999), SMEs can create strategic alliances with competitors to adopt an aggressive stance against large firms. Here, there is a deliberated horizontal strategy adopted by SMEs to compete in the global market.

Vertical alliances benefit SMEs, even when such firms are relatively weak in scale and supply chain management. Arend (2006) provides evidence on how alliance activity benefits SMEs through leveraging differentiation advantages rather than generating them. So, SMEs are encouraged to develop cooperative activities with their competitors but also with their suppliers and customers when these actors are also their competitors.

All these researches explain the advantages and disadvantages of coopetition. However, they do not describe the different possibilities of coopetitive relationships between SMEs. We want
to show that coopetition strategies are not all the same. According to SMEs, coopetitive relationships among SMEs could be more or less constrained by prime-contractors (Depeyre and Dumez 2008). This could be the case in subcontracting relationships. Indeed, prime-contractors have power over subcontractors and can design all economic exchanges between them. So, is the coopetitive strategy, between subcontracting SMEs, deliberately chosen or imposed by the prime contractors?

Methodology

Sample

Even though the focus of the present study is SMEs, it is important to explore how all the actors in the sector see the process of coopetition between SMEs. Eight groups of actors (French firms) were selected. We directed interviews towards the co-opetitive relationships between actors: 1) Customers (CNES, DGA, DGAC, ESA); 2) Public Administration (Toulouse Chamber of Commerce, Conseil Général Haute Garonne); 3) Primes (Airbus, Astrium, Dassault Aviation, EADS, Thalès Alenia Space); 4) Research Centres (CEA, CNRS Toulouse, MEDES, ONERA, TESA); 5) Suppliers of Rank 1 (Aircelle, Labinal, Liebherr Aerospace, Sogerma, Thalès Avionics); 6) Suppliers of Rank 2 (Altran, Desirade, Integral systems, Isocel, Mercator Ocean, Spot Image, Steria, Telespazio, Toptech); 7) Rank 3 suppliers (Aerofonctions SAS, EMAC, Siemens Vdo, Sierbla); and 8) Professional Associations (BNAE, Cofrend, Mecanic Vallée). The hierarchical positions of actors are presented in Figure 1. Each actor is in direct relationships with actors in the next rank below them. For example, the customer has relationships only with the prime, not with suppliers; suppliers of Rank 1 have relationships with only suppliers of Rank 2, and so on. Moreover, customers, primes and suppliers of Rank 1 are rather large enterprises, because these firms are
public organizations or great multinational firms (assemblers who subcontract parts of the
design and production, like subsystems, from others firms).

The sector of aeronautical and aerospace engineering relates to three types of activity:
construction of engines for aircraft, construction of cells of aircraft, construction of launchers
and spacecraft. Three types of suppliers exist (Niosi and Zhegu, 2005). 1) The suppliers of
Rank 1 design, produce and deliver to the customer, in systems, subsets or complete modules.
They coordinate the relations with the suppliers of lower ranks. 2) The suppliers of Rank 2
manufacture systems of propulsion, avionics, structure and subsets. 3) The suppliers of Rank
3 manufacture electronic subsets, hydraulic systems, parts of fuselage, etc. It should be noted
that a supplier of Rank 2, can be of Rank 1 for certain activities and Rank 3 for others. The
suppliers of lower ranks are not in direct relationship with the initial customer.

We conducted 58 interviews with 40 different organizations in the aerospace industry (prime
contractors, subcontractors, research centres and economic agencies such as the European
Space Agency).
Methods

The data analysis was undertaken in 3 stages. 1) The identification of the principal concepts made it possible to identify the topics by open coding (Locke, 2001), in order to create provisional categories of the first order. 2) Axial coding made it possible to connect the various identified categories (Strauss and Corbin, 1998), in order to create consolidated categories of a higher nature (theoretical dimensions). 3) The final aggregation was made possible while gathering the theoretical categories of the second order. They were compared in order to create theoretical aggregates, constituting the last stage of the qualitative analysis and delimiting the theoretical framework (Locke, 2001). In order to guarantee the anonymity of the people interviewed, verbatim quotations are anonyms.

Findings

This study lasted two years, starting in 2007. The data was obtained from 58 semi-structured interviews and from secondary sources (media articles). The total length of the interviews was 43:30 hours. The interviews were conducted individually, except in three cases where two or three persons were present at the same time. A guarantee of anonymity was given to all respondents. 23 % of the interviews were conducted by telephone and 77 % face to face. 61 % of the questioned organizations are large, and 39 % SMEs. A third of respondents are managers, Chief Executive Officers or Chairmen and Chief Executive Officers. Another third of the interviewees are directors of a specific function. And the last third were persons in charge within a function, the engineers and the consultants. 33 % of the interviewees were employed
at the head office, 27 % in R&D, 24 % in strategy and planning, 7 % in purchase management, 5 % in quality, 2 % in communication and 2 % in human resource management.

Our study identifies two coopetitive profiles of SMEs (see Figure 2): 1) Exogenous coopetition occurs where an actor, being in a higher hierarchical position, forces rival suppliers to co-operate between them. It is not a choice. It is an external constraint to cooperate in order to win the contract. So, suppliers consider this obligation to be an external demand which they integrate in their business proposition. 2) Endogenous coopetition is characterized by cooperative relationships between suppliers of same rank, where rivals choose to establish coopetitive relationships. Suppliers decide together to cooperate, because they want to join forces, to build and create business proposition together.
Exogenous coopetition: a constrained coopetition

The profile of forced coopetitors is likely to be SMEs with specialized skills. Their innovative power is very important. They respond to the impossibility of the prime contractors making their product.
The customer of the prime contractor, is often a French public organization or a European public organization. Indeed, normally only large enterprises have the financial capacity to buy a satellite or an airplane. The customer prompts the prime contractor to build a coopetitive system with suppliers. Generally, the customer cannot force the prime contractor to create an alliance of suppliers, because the customer is not in direct relationships with actors of lower ranks. But the customer can impose coopetition between prime contractors. Subsequently, some large prime contractors force their subcontractors and co-contractors to cooperate. Exogenous coopetition involves hierarchical relationships between actors of different ranks (Cf. Figure 3). The suppliers are often SMEs and the strategy of coopetition stems from external volition. It is an external given for suppliers which they have to accept. Prime contractors pass on this obligation, initially imposed by their customers, to their suppliers. Subcontractors and co-contractors can be rivals but they have to cooperate between them. It is a unilateral decision from customers and suppliers have to accept it, or else they will not be given a role in the project team.

“No, we have not been given the choice [...] the customer has not asked our opinion”

Figure 3: Exogenous coopetition: hierarchical obligation
During the interviews, we asked the interviewees, what reasons encourage customers and prime contractor to impose a strategy of coopetition? In other words, what are the external constraints which characterize exogenous coopetition for an SME supplier?

There are technical constraints. Customers want prime contractors to achieve synergies and complementary skills of suppliers. Prime contractors look for suppliers who make the same products or services with specific knowledge and skills. They group the best technological and innovative capacities together, which the suppliers would not otherwise be able to share because they are rival firms. Suppliers are confronted with a paradoxical approach. On the one hand, they know their competitors better because they share knowledge and information during the life of a coopetitive project. Each partner learns about the management, organization, and processes of their coopetitor. So, coopetition can be a competitive advantage for a partner because he will use information collected about competitors during the coopetitive project. Thus, coopetition is a “co-operative illusion” for firms. On the other hand, suppliers share their state-of-the-art technologies with their rivals. They have to protect their knowledge and information against opportunist behaviour of partners.

“[…] there are still very strong reserves of some suppliers who say to us: in the end, you are here to take our good ideas and to inform our competitors about them”

There are control constraints. The involvement of prime contractors in the organization of coopetitive processes is very strong. Firms who force rival suppliers to cooperate help and control the organization of the coopetitive project: the choice of partners, management and aims of coopetition, etc. Forced coopetitors have very little influence on the terms of coopetition. They only demonstrate drive and, sometimes, consult about coopetitive organization. The number of third parties is reduced. It is the aim of customer to have a single representative in all the coopetitive chain. The customer improves these transaction costs and
optimizes the leadership of the coopetitive project. They decide and allocate supplier responsibilities and risks. The customer deals directly only with the prime contractor.

“We are in the project team because the customer imposed it on us [...] other competitors are forced to work with us [...] the aim is to have one referee for the global offer”

There are financial constraints. Forced coopetition can be planned after the invitation to tender is issued to all suppliers. It is a coopetition *a posteriori*. Firstly, all the rivals give their proposal on the basis of classical competition. The study, *a posteriori*, of proposals from suppliers, leads to the choice of coopetitive constraint. Coopetition makes a credible offer. Thanks to imposed coopetition, prime contractors confirm with the customer, the advisability of integrating into the consortium coopetitors according to their technological quality and financial capacity.

The alliance allows sharing financial resources between SME suppliers. Even in an area of high technology, the supplier can respond to the demands of the customer to reduce prices and win the business.

“When a customer requires you to reduce prices, you cannot go it alone”

There are legal constraints. Legal constraints are important within the aeronautic and aerospace industry. A rule establishes a real coopetitive system: the geographic return rule. This rule consists, for the European Space Agency, of investing grants-in-aid equal to the financial contributions of each country, for each state of the European Union, by allocating contracts for the execution of space activities. These constraints are a selection criterion for partners. SMEs are favoured because they receive grants-in-aid according to the economic development of the region. Indeed, the more complex the programme, the more resources (financial, human, technological, etc.) are engaged. So, customers and prime contractors try to
benefit from this rule, or else the project cannot go forward. Once again, they control the coopetitive processes and confirm coopetitive choices of the consortium.

“[…] it is politic, customer public organizations impose the geographic return rule on actors and they force suppliers of different countries to work together even if they are rivals.”

**Endogenous coopetition : a desired coopetition**

The profile of desired coopetitors is likely to be SMEs with specialized skills and strength in innovation. An SME that is a supplier of Rank 2 or 3 looks for partners (of the same rank) to develop products or services jointly. In contrast with exogenous coopetition, the customer does not force the prime contractor to create an alliance of suppliers. Generally, the customer prefers to have price competition rather than a sharing of skills. Rival subcontractors and co-contractors constitute an alliance to improve their chance of winning a market, to share knowledge and skills and to pool resources. Endogenous coopetition is not a hierarchical relationship between actors; it is a voluntary coalition of partners of same rank, even if they are competitors (Cf. Figure 4). These suppliers are often SMEs and the strategy of coopetition stems from internal volition, a wish from suppliers. It is an internal given for suppliers which they build into the coopetitive project. Prime contractors can refuse this alliance. Subcontractors and co-contractors can be rivals but they have to cooperate between them. It is a joint decision between suppliers.
During interviews, we asked the interviewees, what are reasons which encourage rival suppliers to cooperate between them? In other words, what are the joint aims which characterize endogenous coopetition for an SME supplier?

There is a “coopetitive intention”. The choice to cooperate with competitors is taken without external influence. It is a choice that is not prompted and not constrained. A supplier suggests a strategic alliance to a competitor. There is no need to force coopetition because the actors seek it voluntarily. So, the coopetitive intention can be a joint wish between suppliers or from a single supplier. It is not coercive.

“We have cooperative propositions from bosses of other SME suppliers of the same rank as my firm, who wish to cooperate together.”

There is a wish to join forces in order to win a market: “united we stand, divided we fall”. Rival suppliers cooperate in order to bid for tenders. Indeed, if the supplier bids for a tender alone, he may not be able to execute the whole of project. So, suppliers look for complementary resources in order to improve their proposal. They choose the coopetitive position to generate private and collective gains. For example, an SME supplier, who bids alone, takes a higher risk of seeing his proposal discarded. Prime contractors need fewer
skills, technological and financial resources when dealing with a coopetitive union. The risk of losing a market is lower when competitors cooperate. Thus, the probability of securing benefits is higher when those advantages are collective rather than private.

“We determined to join with another supplier in order to bid for tenders”

There is a desire to reallocate positions of dominance between suppliers. Suppliers can decide to unite in order to compete with other competitors or to prevent rivals bidding for tenders. The union can reach critical mass for the coopetitors. Through a shakeout among competitors, the probability of securing a market is higher.

“We create a cooperation with another supplier because we do not want another competitor to win the market”

There are external threats. Suppliers choose a coopetitive approach in order to protect their innovative capacities in the face of international rivalry. European Union states are specifically implicated because the aim is to protect strategic areas of the European Union. There is a risk that a foreign company will capture a strategic market. So, European suppliers unite in order to stop that happening. Consequently, coopetition is a kind of protectionism.

“In order to see to beat American companies, we prefer to work with a competitor”

Discussion

This research provides new perspectives on coopetitive relationships, studying the combination of competitive and cooperative behaviour (Bengtsson and Kock, 2000) and the interplay of SMEs in a complex business network. All the actors were interviewed about simultaneous cooperative and competitive relationships. According to the interviewees, the aeronautic and aerospace industry has evolved coopetitive relationships because, as shown by
previous research, the airline sector uses coöperation (Gummesson, 1997) and a strategy of coöperation is evident at all hierarchical levels relating to the actors: customers, prime contractors, suppliers, etc., whatever the size of firms (Gnyawali et al., 2006, Ganguli, 2007). As we have shown, coöperation does not evolve in an inflexible dyadic relationship. The aeronautic and aerospace industry is in line with theory of business ecosystems where actors interact between them within a complex network. Coöpetitive networks provide an explanation relating to complex networks (Dagnino and Padula, 2002).

Our study provides a perspective on an aspect that has been discussed relatively little. The study shows that there are two kinds of coöperation: exogenous and endogenous coöperation. Exogenous coöperation involves supplier SMEs, who have specific skills, innovative power and flexibility. Customer wants a coöpetitive system, so the prime contractor forces rival suppliers to cooperate. Exogenous coöperation involves hierarchical relationships between actors of different ranks. It is an external desire, a unilateral decision, accepted by suppliers. There are four kinds of constraints that encourage customers to want a coöpetitive relationship: technical constraints, control constraints, financial constraints and legal constraints.

Endogenous coöperation involves supplier SMEs of Rank 2 or 3 with specific skills, innovative power and flexibility. Suppliers want to adopt a strategy of coöperation because they wish to develop products or services jointly, improve their chance of winning a contract, share knowledge and skills, pool resources, etc. Endogenous coöperation is a choice, not an external constraint. It is a desire of partners of the same rank, even if they are competitors. We have shown that four reasons encourage suppliers to choose a strategy of coöperation: they have a “coöpetitive intention”, want to link forces in order to win a market, want to reallocate positions of dominance between suppliers, or face up to external threats.
Therefore, our study shows that coopetition can be constrained or voluntary. This research indicates that coopetitors have convergent and divergent aims (Hamel et al., 1989). Their coopetitive choice can be a desired action in order to share collective benefits that are higher than private gains (Morgan and Hunt, 1994) and complete their innovative portfolio (Depeyre and Dumez, 2008). Coopetitors must react to characteristics of a market, a customer or a rule (Depeyre and Dumez, 2007). Our study shows that coopetition depends on level of interaction, competitive positions and the purposes of the co-operative agreement (M’Chirgui, 2005). Coopetition is different according to the network position (Moore, 1996) and the size of the firm (Morris et al., 2007). In exogenous coopetition, the wish of customer secures cooperation between rivals (Depeyre and Dumez, 2008). The involvement of customers and prime contractors in the coopetitive organization is strong.

Our study has some limitations. From the point of view of method, it would be interesting to test our profiles of coopetition in other industrial sectors and in other cultural contexts. Our chosen method meant that interviewees gave their subjective observations. This may produce bias in the analysis of their exact words. From the point of view of theory, we chose not to observe the cooperation between customers or prime contractors. Our research focus was on SMEs, but customers and prime contractors are large firms. In future research it would be desirable to include study of coopetition among all actors in the sector. We have not shown the involvement of public administration in the coopetitive process, as a third party. Indeed, these actors have an important influence on the choice of strategy leading to coopetition. So, what is the real influence of European public organizations in coopetition? What are the determinants of coopetition? How should we measure the performance of coopetitive projects for SMEs?
References


Prediction of Success of Female Entrepreneurs Using a Biographical Questionnaire

Cornelius Muelenz, Dorothea Kissel, Heinz Klandt

This paper presents the development of a biographical questionnaire to measure entrepreneurial potential. Version 1 (191 items) was constructed and tested in a key sample of \( n = 180 \) female entrepreneurs on the basis of an internet-literature research, interviews with experts \( (n=17) \) and entrepreneurs \( (n=40) \). An item analysis led to version 2 (82 weighted items) which was cross-validated in a second sample of \( n = 110 \) female entrepreneurs. Final results show a good validity (average correlation between questionnaire score and sales \( r = .42 \) for the 3\(^{rd}\) to the 5\(^{th}\) business year) as well as a good reliability (Cronbach’s \( \alpha = .78 \)). The biographical questionnaire provides a standardised and valid assessment of entrepreneurial potential and person-related success prediction.

Introduction

The prediction of the success of business foundations has always been an area of interest in the scientific and applied practice community. Credit institutes, investors and financial consultants have to decide whether applicants who plan business foundations can be granted loans or not. It is important to take personal factors of applicants as well as economic considerations in account in to predict business success. Valid decisions are required for the applicants as well as the investors and financial consultants. The financial risk for the investors depends directly on the quality of financial decisions i.e. whether the investment can be paid off or whether the consultation had been fruitful. Such decisions are also important for the entrepreneur. Suitable people require sponsorship. Unsuitable applicants, however, should be prevented from potential business failure. Hunter and Hunter (1984) describe the association between the validity of personnel decisions in businesses and the growths of a business. They report that appropriate aptitude assessments can increase or reduce sales of the business by up to 20%.

The prediction of business success requires the application of diagnostic principles in personality assessments. The prediction of success of entrepreneurs resembles the process to personnel selection. Both procedures require similar selection and assessment procedures (table 1).
Table 1

Comparison of Entrepreneur and Employee Applicants.

<table>
<thead>
<tr>
<th>Entrepreneur</th>
<th>Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for sponsorship</td>
<td>Application for job</td>
</tr>
<tr>
<td>Selection of entrepreneur</td>
<td>Personnel selection</td>
</tr>
<tr>
<td>Assessment methods</td>
<td>Assessment methods</td>
</tr>
<tr>
<td>Business success</td>
<td>Successful career</td>
</tr>
<tr>
<td>Profit for investor</td>
<td>Profit for employer</td>
</tr>
</tbody>
</table>

Extensive research has in previous decades led to substantial knowledge in the area of classical personnel selection (Schuler 2006). About 15-20 different procedures including online variations (Hell, Schuler, Boramir, and Schaar 2006) have been used to date in Germany for the external personnel selection (Schuler, Frier, and Kaufmann 1993). Procedures which have been applied range from graphology to intelligence test and sophisticated assessment-centres.

The most commonly implemented procedures in the top 300 German businesses include interviews, work portfolios, analysis of application documents, performance-, intelligence- and aptitude tests, biographical questionnaires and assessment-centre outcomes (Schuler et al. 1993). The values of these procedures show substantial differences. Meta analyses report validity criteria ranging from .34 to .51 (Schmidt and Hunter 1998, p. 22). These allow initial conclusions for procedures to test the suitability for entrepreneurs. It can be hypothesised that effective measures for the prediction of career success can also be useful for the prediction of business success.
An Assessment Procedure to Predict Business Success

Standardisation and validity are key criteria for measures of individual potential of business success. These basic criteria for aptitude assessments are described in DIN 33430\(^1\) (Kersting and Hornke 2003; Kersting and Hornke 2006). The superiority of standardised and validated procedures over any other means of assessments in aptitude scenarios has been thoroughly researched and documented (Kersting and Hornke 2006; Schuler 2006). Despite of this it is surprising that non-standardised interviews, check lists, internal rating systems, thematic questionnaires or home-grown guidelines remain still to be the most commonly used procedures by banks, investors and financial consultants to assess entrepreneurs (Kissel and Muelenz 2010, in preparation). To achieve appropriate validity it is necessary to collect a number of evidence-based criteria with high prognostic value.

For example the human capital, in form of training or professional experience, has been shown to be a valid predictor of business success (Klandt 1984; Brüderl, Preisendörfer, and Ziegler, 1992). Additional criteria for aptitude procedures for entrepreneurs are procedural economy (second level validity criteria) and furthermore the opportunity to consider training and coaching needs. A biographical questionnaire appears to be a suitable measure to predict business success if existing knowledge about personnel selection procedures is taken into account. Biographical data have shown to be valid in the prediction of career success (Hunter and Hunter 1984; Schmidt and Hunter 1998; Schuler 2006) and are suitable for an objective diagnosis of business success (Gunter and Furnham 2001). Banks and financial consultants in Germany already use biographical data to assess the suitability of business starters (Kissel and Muelenz 2010, in preparation). Wins and Rosenstiel (2000) report that the success of biographical questionnaires is based firstly on the prediction of

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\(^1\) DIN 33430 is a practice standard that provides norms for selection, planning, realization and analysis of professional aptitude assessments. It was developed by a German group of Psychologists in 2002. Central requirements are the quality criteria objectivity, reliability and validity.
future behaviour based on the evaluation of previous behaviour and secondly, on test theories for example the empirical and statistical test construction and validation.

The primary psychological assumption that future behaviour is best predicted from past behaviour also applies in the context of business foundations. The biography of a person is not determined by random influences (Bühler 1959), but also by self-determined elements which make her unique. Consequently, personal characteristics can be derivated from a biography and these can be investigated using a biographical questionnaire which has predictive factors.

The biographical questionnaire has essential advantages in comparison to other measures (e.g. personality assessments) because subjects in aptitude test situations naturally intend to present themselves in favourable positions. This however, may result in response bias towards social desirability, as subjects assessment performance is based on their assumptions about the theoretical concepts on which the assessments are based (Stehle 1990). The biographical questionnaire allows the collection of genuine, objective and testable data and therefore the risk of falsification is low. Therefore, it is unclear why biographical questionnaires are rarely used in Germany. Reasons for this may be the time- and cost intensive procedures involved in the test construction (Wins, and Rosenstiehl 2000) and that biographical data for personnel selection have only been used in recent history. Stehle (1983) was one of the first people in Germany who investigated biographical data in personnel selection using scientific principle. Also human resources managers in Germany frequently underestimate the validity and economy of biographical questionnaires (Schuler et al. 1993).

However, there are signs that biographical data for the prediction of business success are increasingly used. Biographical data provide robust outcomes following critical analysis based on their high validity criteria and authentic data. Modern employment environments encourage the use and prognostic value of biographical data. Gunter and Furnham (2001, p. 178) comment: “Changes to the world of work are probably going to increase the usefulness
of the biodata approach. [...] Indeed, we predict a renaissance of the biodata method to assess business potential.”

The “Biographical Questionnaire”

The biographical questionnaire is a standardised outcome measure which requires the subjects to give details about their biographical history. The development of the questionnaire is based firstly, on the principles of the classical test theory and secondly, is tailored to the particular purpose. The biographical questionnaire includes on one hand objective, testable data and on the other hand subjective information about a person’s earlier, current and future life scenarios. As such it includes demographical variables, experiences to date, professional activities and developments as well as attitudes and interests. The biographical questionnaire represents in the first instance a retrospective description of a life history based on experiences and interactional pattern of a person (Nickels 1994). The association with career progression and success is generally a focus point in a person’s life history.

The biographical questionnaire was already implemented at the beginning of the 20th century for the selection of personnel in insurance companies (Stehle 1990) and spread eventually into parts of the economy such as military, industry, research and development or areas like the prediction of leadership potential (Schuler 2006).

There are controversial opinions about the meaning of the term ‘biographical item’, but the orientation on a person’s history is a generally accepted criterion (Mael 1991). Instead of formulating items like ‘Are you interested in the topic YX?’ one would ask specifically ‘How many books about topic XY have you read in the last two years?’ Such questions are external, historical and testable. Such characteristics optimise the psychometric qualities (objectivity, reliability, validity) of outcome measures (Schuler 2006). Research results show that biographical questionnaires are accepted and have good predictive powers (Hunter and Hunter 1984; Schmidt and Hunter 2000).
The practical implementation of the biographical questionnaire is characterised by its ease of use and straightforward data analysis and is therefore particularly suitable for applied practitioners.

Most validity studies of biographical information date back to the 1970’s and early 1980’s. Despite of this, literature reviews frequently refer to these early findings in relation to modern hypotheses. One example is Schuler (2004), who presents the “actual state” of aptitude assessments validity criteria in his organizational psychology textbook. But for biographical data he refers to the well known study by Hunter and Hunter (1984). It proves very difficult to find more recent studies about the validity of biographical data. Life- and occupational histories have changed significantly in recent years (Gunter and Furnham 2001) resulting in consequences for the prediction of career success on the basis of biographical data. Therefore, further research in this area appears essential.

**Theoretical Model for the Prediction of Business Success**

Research about diagnostic and assessment procedures in the area of entrepreneurship is extremely rare. Especially in the field of women as business starters are very few evaluations of diagnostic and assessment procedures. The initiative of the Ministry for Research and Education: *Power for Female Entrepreneurs-Steps to improve women’s potential to found businesses* led to the project “Ladies First – the development of a gender fair diagnostic assessment measure for potential business starters”. This involved the development of the biographical questionnaire BEP check (Biographical Entrepreneur Potential check).

Sonnenfeld and Kotter’s model (1982) provides the theoretical base to explain the association between biographical data and professional success in general. They assume three main areas of biography (“working environment”, “individual sphere” and “family background”) to be relevant for professional success. An adopted model (see figure 1)
replaces professional success with business success. Also “macro influences” are added to the adapted model representing all influences relevant for business success, which are not part of biography (for example external factors like business plan and start-up capital) and therefore not assessed by the biographical questionnaire.

Figure 1
The Association between Biography and Business Success.

Method
Construction of the Biographical Questionnaire

There are four different approaches to develop a biographical questionnaire: the inductive approach, the deductive approach, the sub-grouping approach and the empirical approach. The main difference between them is the item generation and selection based on the theoretical model or empirical guidelines (Schuler 2006). The BEP check was developed using the empirical approach. Initially, item questions were collected and revised. Questions
underwent a selection process and were weighted using their calculated validity due to an external criterion. Therefore, a so called key sample (Schuler 1990) with a minimum of 100 subjects was used, which represents a wide range of characteristics of the criteria that has to be predicted. The items were summarized according to their weight resulting in the item key. Following that, cross-validation is undertaken in a second sample - the validity sample. Cross-validation provides evidence about the correlation between questionnaire score and the criteria which is intended to be predicted. Consequently, a reliable statement about the quality criteria validity has been achieved. The development and application of the BEP check followed the guidelines of DIN 33430 (Kersting and Hornke 2003; Kersting and Hornke 2006).

A literature review focussed firstly, on procedures for the selection of business starters and associated consultations. Secondly, results about predictive factors for successful business foundations were researched in order to generate an item pool.

The literature review was followed by an interview study with experts i.e. financial consultants and investors within the German entrepreneurship domains. A half-standardised interview guideline was used to investigate the opinions of the experts about: firstly, which personal aspects predict business success and secondly, how these are represented in female entrepreneurs. Additionally, the experts were asked which measures had been applied to assess business success and what the optimal measure should look like. These qualitative data were evaluated to contribute to the item generation (Kissel and Muelenz 2010, in preparation).

Forty female entrepreneurs were investigated using a biographical interview (Bortz and Döring 2006; Hopf 2007). This empirical data was generated using standardised and written curriculum vitae formats (Flick 2000) and a half-standardised interview guideline. The content analysis contributed to the generation of potential elements for the biographical questionnaire.
A further research was conducted to find out which online procedures for the selection and consultation of business starters were available. Forty-one online procedures were identified which were also included in the item generation (Kissel and Muelenz 2010, in preparation). According to practical and theoretical needs (classical test construction) an item pool of \( i = 990 \) items was generated on the basis of the interviews with experts and female entrepreneurs, literature and online research. The item pool was reduced by a number of steps to \( i = 191 \) using the criteria similarity, relevance, biographical orientation, ethic and ease of comprehension. A group of 15 people evaluated the pilot version of the questionnaire regarding ease of use and comprehensibility.

**Analysis of Item Weights in the Key Sample**

The first sample for the online survey was obtained through nationwide networks related with self employment. Participants were initially contacted by post, emails, leaflets, announcements about the projects and direct emails via business network “Xing”. The total initial sample consisted of 1562 subjects (key sample). 180 subjects (11.5 percent) fulfilled the criteria: self-employed women who where at least at the end of their second business year and had completed the questionnaire. Average age was 45.1 years with a range from 26 to 78 years. Table 2 shows the description of the key sample with percentage given for county, type of foundation, business branch, individual/team business foundations and full/part time business foundation (sorted by descending frequency).
Table 2

Description of the Key Sample, n=180.

<table>
<thead>
<tr>
<th>County</th>
<th>Type of Foundation</th>
<th>Branch</th>
<th>Single/Team</th>
<th>Full/Part Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordrhein-Westfalen</td>
<td>New foundation</td>
<td>Personal services</td>
<td>42.2</td>
<td>Full time 72.2</td>
</tr>
<tr>
<td></td>
<td>Management-Buy-in</td>
<td>Economic services</td>
<td>30.0</td>
<td>Team 8.9</td>
</tr>
<tr>
<td>Hessen</td>
<td>Management-Buy-out</td>
<td>Other branches or services</td>
<td>16.7</td>
<td>Part time 27.8</td>
</tr>
<tr>
<td>Bayern Others (&lt; 12 perc.)</td>
<td>Franchise</td>
<td>Trade</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial services</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Building industry</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hotel and restaurant industry</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traffic, telecommunication</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

Values are percentage in descending order.

The validation criteria and item weighting of the BEP check has to include objective/economic and subjective aspects. Sales of the second business year were used to indicate success. Sales are common criteria to measure success. Subjective success was measured by the satisfactory scale by Klandt (1984) which concerns different aspects of life and work related to self employment. The subjective success indicator (scale score, range 7-28) and the objective success indicator (sales in the second business year, range 1-8) were multiplied resulting in the integrated success indicator (range 7-224).

Using the integrated success indicator 180 subjects were sorted and 4 quartiles were generated. Q₁ represents the group with the percentile rank² 1-25, Q₂ the percentile rank 26-50, Q₃ the percentile rank 51-75 and Q₄ the percentile rank 76-100. Item weights were calculated by comparing the extreme groups Q₄ (very successful) vs. Q₁ (unsuccessful). A percentage frequency distribution was undertaken for the multiple choice responses of every question for the two extreme groups. Frequency differences for every multiple choice response were transformed into “netto and rough weights (0,1,2)” according to England (1971). Table 3 illustrates the process in relation to a fictional question. A question will be

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² Percent ranks are related to the integrated success indicator score. Lowest score equals percent rank 1, highest score equals percent rank 100. Q₁ represent the 25 percent with the lowest scores.
eliminated if all multiple choice responses achieve the same weight. Following this procedure the number of items was reduced from 191 to 82. The remaining items were strong predictors of the integrated success indicator.

Table 3
Calculation of Item Weights.

<table>
<thead>
<tr>
<th>Question: How did you prepare your foundation?</th>
<th>Percentile Q₁</th>
<th>Percentile Q₄</th>
<th>Difference (Q₄-Q₁)</th>
<th>Netto Weight</th>
<th>Rough Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Strategy 1</td>
<td>10</td>
<td>45</td>
<td>-35</td>
<td>-8</td>
<td>0</td>
</tr>
<tr>
<td>b) Strategy 2</td>
<td>25</td>
<td>40</td>
<td>-15</td>
<td>-3</td>
<td>1</td>
</tr>
<tr>
<td>c) Strategy 3</td>
<td>40</td>
<td>10</td>
<td>30</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>d) Strategy 4</td>
<td>20</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>e) Strategy 5</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Results
Validity Criteria in the Validation Sample

The cross validity was calculated according to the methods used for biographical questionnaires. Therefore a second sample (validation sample) is required which has to be independent from the initial sample (key sample). This second sample was generated using the same methods as the key sample. 998 subjects participated in the survey. 110 subjects fulfilled the criteria and completed the questionnaire (11.0 percent). Average age was 44.0 years with a range from 29 to 63 years. Table 4 shows the description of the validation sample with percentages given for county, type of business foundation, business branch, individual/team foundation and full/part time foundation (sorted by descending frequency).
Table 4

Description of the Validation Sample, n=110.

<table>
<thead>
<tr>
<th>County</th>
<th>Type of Foundation</th>
<th>Branch</th>
<th>Single/Team</th>
<th>Full/Part time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordrhein-Westfalen</td>
<td>New foundation 96,4</td>
<td>Personal services 45,5</td>
<td>Single 88,2</td>
<td>Full time 83,6</td>
</tr>
<tr>
<td>Hessen</td>
<td>Management-Buy-in 1,8</td>
<td>Economic services 31,8</td>
<td>Team 11,8</td>
<td>Part time 16,4</td>
</tr>
<tr>
<td>Bayern</td>
<td>Management-Buy-out 0,9</td>
<td>Other branches or services 13,6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (&lt;12 perc.)</td>
<td>Franchise 0,9</td>
<td>Trade 4,5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Building industry 2,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial services 1,8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hotel and restaurant industry 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traffic, telecommunication 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Values are percentage in descending order.

Single item weights of 82 items were summed up to obtain the total biographical score (BS). The internal consistency was Cronbach’s $\alpha = .78$ which was satisfactory. The rank correlation between BS and the integrated success indicator in the key sample was $r = .67$. The rank correlation was $r = .33$ in the validation sample, which was also satisfactory. Most important is the relationship with objective success. The correlation between BS and sales is significant for all assessed business years. The amount is highest for the third to the fifth business year: $r_1 = .24$, $r_2 = .35$, $r_3 = .43$, $r_4 = .42$, $r_5 = .41$. The average correlation of the BEP check is $r = .37$ which is equivalent to meta-analysis findings of Hunter and Hunter (1984) who reported an average correlation of $r = .37$ for biographical questionnaires and professional success.

Normative Data

The Kolmogorov-Smirnov-Adaption test confirmed a normal distribution in the validation sample with $Z = 0.684; p = .74$ (see figure 2). This distribution is the source for normative data. The BS ($M = 80.75; SD = 11.56$) is transformed to the standardized score by $z$-transformation ($M = 0, SD = 1$). The $z$-value is converted into a “Biographical Quotient”
BQ \( (M = 100; SD = 15) \) in a similar way as raw scores of intelligence tests are converted into an intelligence quotient. The BQ provides the possibility of obtaining percentile ranks (see table 5).

**Figure 2**

Distribution of the Biographical Score in the Validation Sample.

![Distribution of the Biographical Score in the Validation Sample.](image)

**Table 5**

Normative Data of the BEP Check.

<table>
<thead>
<tr>
<th>BS</th>
<th>z</th>
<th>BQ</th>
<th>pr</th>
<th>BS</th>
<th>z</th>
<th>BQ</th>
<th>pr</th>
<th>BS</th>
<th>z</th>
<th>BQ</th>
<th>pr</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>-1.97</td>
<td>70.48</td>
<td>2.45</td>
<td>74</td>
<td>-0.58</td>
<td>91.24</td>
<td>27.96</td>
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Biographical Score (BS), z-score (z), Biographical Quotient (BQ) and percentile rank (pr).
Furthermore six domain-specific results are provided for the examinee (1. relevant professional experiences, 2. attitudes and occupational behaviour, 3. foundation related experiences, 4. current foundation, 5. family and 6. other aspects). The domain-specific results are expressed as percentage of the achieved score in each area (see figure 3). This kind of presentation provides an objective evaluation of relevant skills and the possible need of training in certain areas.

**Figure 3**

**Domain-Specific Results of a Fictional Examinee.**

![Bar chart showing domain-specific results](image)

**Application for Different Age and Branch Groups**

Literature shows that biographical questionnaires are less suitable for adolescents, because their personal life history is too short. The BEP check can be applied equally for younger and older people. We recommend a minimum age of 25 to obtain a realistic and valid outcome. For example, an 18 year old entrepreneur has not yet had the opportunity to obtain a university degree. Age alone appeared not to be an advantage in general as one could expect. T-test results showed no significant differences between the BS of younger (age \( \leq 34 \)) and older (age \( > 34 \)) entrepreneurs \( t(102) = .10; p = \text{n.s.} \).
In general, more precise data can be obtained if a specific business branch is investigated rather than a whole group of entrepreneurs. This study includes entrepreneurs from all business branches, but a bias is not expected. The idea of BEP check is that there are biographical aspects which are relevant for a successful business foundation. Business branch specific aspects are relevant in a personal biography, but these were not assessed. ANOVA results showed no significant differences in the integrated success indicator for different business branches \([F(5,109) = 1.72, \ p = \text{n.s.}]\). Multinomial regression results showed that branch was no predicting factor for the BS [Nagelkerke’s \(R^2 < .20\)].

Discussion

The assessment of entrepreneurial aptitude in Germany still lacks standardized or validated assessment procedures in most cases. This is a critical point as the outcomes of these assessments lead to decisions about foundations. In general, assessment procedures which fulfil the quality criteria will improve the validity of predictions in contrast to subjective and non-standardized procedures.

This study describes the development of the biographical questionnaire BEP check which represents a high quality assessment procedure for entrepreneurs. The items were selected and weighted in a key sample \((n = 180 \text{ female entrepreneurs})\) and cross-validated in a second validation sample \((n = 110 \text{ female entrepreneurs})\) in line with the requirements for empirical approach.

Cronbach’s \(\alpha = .78\) proves that the variable “biographical potential” is suitable to predict business success using the BEP check and can be measured reliably and homogenously. The distribution analysis further confirms that the biographical potential can be measured like a personal characteristic with this questionnaire. Firstly, this is due to the large deviation of “Biographical Scores” \((SD = 11.75)\) which means that people can be well
differentiated. This is measurable and represented by low to high scores on a one-dimensional scale.

Secondly, the deviation is within normal distribution as it is typical for personal characteristics (for example intelligence). This distribution allows, furthermore, to convert raw data to standardised scores and to calculate percentile ranks. Percentile ranks are useful and practical to evaluate and compare person related potential.

Analysis of validity proved that BEP check is able to predict entrepreneurial success. Validity, defined as the correlation between biographical potential (BS) and business success (sales per year), was satisfactory with an average $r = .42$ for the third to the fifth business year. Two facts are important. Firstly, BEP check provides a good prediction of business success until the fifth business year. Secondly, the strength of prediction of business success increases from the first to the third business year and then stabilises. That means that personal impact increases while external impact decreases. In conclusion, external factors like business location are more important at first. But over the years the entrepreneur becomes the most important factor. There appears to be no mention of this fact in the literature to date.

The biographical potential measured as BS by the BEP check proved to be independent from branch or age and can be seen as a personal characteristic. Currently, there is limited evidence of long term outcomes measured by BEP check as the present study used retrospective data of success. Long term studies will have to be conducted to investigate effectiveness of BEP check to measure success prospectively.

The BEP check represents a standardised assessment procedure to measure entrepreneurial potential. It can provide a valid estimation of the individual entrepreneur as the questionnaire does satisfy the quality requirements for such measures. The ease of use and straightforward analysis makes it a useful tool for any assessment of entrepreneurial potential. The BEP check can be characterised as an economic assessment procedure which is recommended to researchers as well as to practitioners.
A large number of studies have been done to relate personal traits and entrepreneurial success. This study showed that prediction of entrepreneurial success on the basis of biographical data is possible with BEP check. The question about the strength of person’s impact to the business success remains open. Biographical data provide a relevant personal approach to investigate the relation of the entrepreneur and business success. This is certainly an area of emerging research interest which is worth investigating further.

**References**


Author’s biography

Cornelius Muelenz studied Psychology at the Johannes Gutenberg University in Mainz. Since 2008 he works as a research assistant at the chair for entrepreneurship at the European Business School in Oestrich-Winkel.

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Prof. Dr. Heinz Klandt studied business administration in Cologne. In 1984 he made his PhD. Since 1998 he is the chair holder of the first chair for entrepreneurship in Germany at the European Business School in Oestrich-Winkel. He initiated the first German entrepreneurship conference “G-Forum” and is director of the bifego institute.
Industrial clusters and networks as complementary sources of competitive advantages to small firms in developing countries: a theoretical essay

Principal Topic

Small and medium enterprises (SMEs) developed functions that create value for the productive system. In developing countries, SMEs play a relevant role for the social development, also. In Brazil, for example, small firms represent 99% of the number of the firms and they employ almost 60% of the national work force. However, 59.9% of them fail in the first four years of life (Sebrae, 2004).

Increasing evidence indicates that industrial cluster and networks can aid SME to overcome their constraints and reduce the rate of bankruptcy. The studies that focus on it can be classified in two main streams. The first one focuses on how agents (firms, universities and support institutions) shape the cluster and their evolution. Lazerson and Lorenzoni (1999), for example, stressed the function of large business in spread technology and in coordination in Italian clusters. Another stream stresses the externalities and collective efficiency. For example, Giuliani, Pietrobelli and Rabellotti (2005) indicated how clustering can contribute to small firms to overcome their constraints and compete in distant markets.

This work aims to bridge these streams focusing on how industrial clusters constrain the strategies of the firms. This theoretical paper explores how the characteristics of the industrial clusters influence the network strategy of the firms placed in clusters.

Key Proposition

Small firms can gain some benefits from firm agglomerations, generally called cluster (Porter, 1999) or industrial districts (Marshall, 1920, Schmitz, 1995), and by means overcome their constraints of resources without losing the flexibility through external economies.

However, clusters are different among themselves, even the ones in the developing countries. Pedersen (1997) has described four types of clusters and has stressed the specialization and the
efficiency collective sources as criteria for distinguishing clusters in developing countries. Van Dijk and Sverrisson (2003), based on previous empirical works, have proposed five different criteria according to the main theoretical characteristics of clusters: spatial proximity, local novelties, number of firms involved in similar activities, inter-firm linkages and specialization. The differences can emerge also from the predominant sector in the cluster. Beaudry and Swann (2009) study has indicated that cluster effects are positive for some industries, while it can be considered insignificant for others.

Networks are a second way for firms overcome their resources limits. Networks mean a linkage among firms (trade agreements, labor division, outsourcing, etc.) and among firms and institutions (technological services, consultants, etc.). Street and Cameron (2007) state that smaller firms are more likely to establish cooperative linkages than larger ones. Moreover, Al-Laham and Souitaris (2008) argue that firm size have a relevant influence on internationalization via research alliances. The firms can establish linkages with other firms to get access to resources that they do not have or are not strategically interested in maintaining internally.

Networks can be promoted by proximity, that is, by clustering, since nearness can reduce transactions costs and help the face to face interaction. In addition, according to Resource Based View firms are different among themselves (Peteraf, 1993, Barney, Hesterly, 2006). This approach fits well in studies about small firms (Rangone, 1999, Aragón-Correa el al, 2008), especially because it focuses on internal resources and allows emphasizing the characteristics of SME: scarcity of resources (capital and human) and dependence of the entrepreneur’s vision.

Based on the stated above, two hypothesis are proposed in this study. Studying the differences among clusters, Pedersen (1997) argue that the benefits raised from agglomerations depend on the structure of the cluster. So, our first hypothesis is that firms that are similar to each other, but placed in clusters that are different to each other, will establish links according to their resources and according to the structure of the cluster. For the studies of the differences among firms, our second hypothesis is
that firms that belong to the same cluster, but bestow with different resources, will have different network strategies.

The methodology applied aims to compare data from two different garment clusters in Minas Gerais State, Brazil. The firms placed in Divinopolis city have an agreement with other institutions, for example, with a technical school and with the Brazilian Service of Support for Micro and Small Enterprises (Sebrae). Moreover, there is an association of producers and there are many other firms of different industrial sector, for example, footwear. On the other hand, in Poços de Caldas, a smaller city than Divinopolis, the firms have no agreements with other institutions neither among the producers. However, it is relevant to notice the rate of importance of the sector to the city, measured by the rate of the employees from this sector in the city when compared to the same index in the state. In Poços de Caldas presents a bigger rate (1.04) than the one found in Divinopolis (0.25). In this study, the data will be collected through a questionnaire and further data will be obtained through official sites and associations. Other sources, such as reports and news about the sector and the industrial districts, will be considered to better understand the context of the study.

Contributions

Some questions arise to policymakers and practitioners. For policymakers, the heterogeneity within and among industrial clusters suggest that the public polices could be changed to consider the differences between industrial clusters. For practitioners, the heterogeneity between firms in the same cluster call attention to the complementary roles played by cluster and networks so small firms can overcome the size constraints.

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¹ This research has been sponsored by CAPES and FAPEMIG
Theory Morphing vs. Theory Testing: Human Capital in Entrepreneurship

Thomas P. Kenworthy

W. Edward McMullan

Abstract
A shift toward theory testing has occurred in A-rated journals across the various Management disciplines. This article examines the outcomes of Human Capital Theory (HCT) testing in the field of Entrepreneurship. Two conclusions are reached: one methodological and the other, substantive. The methodological conclusion is that scholars neglect the core assumptions and hypotheses of HCT. The substantive conclusion is that entrepreneurs may not benefit from formal post-secondary education, suggesting a major ad hoc adjustment to HCT.

Introduction
The initial purpose of this article was to explore the new, cumulative knowledge being generated around the application of Human Capital Theory within the field of entrepreneurship. Our frustrated attempts to unambiguously code the various human capital hypotheses according to level of theory-testing sophistication (c.f., Colquitt and Zapata-Phelan, 2007) led to an awareness that the predictions contained in the many hypotheses under review were morphing considerably across a set of hypotheses that were only nominally dedicated to the testing of Human Capital Theory. As such, this study should be viewed as a case study of theory testing amongst A-rated journals in an emerging social science discipline.

The idea of human capital is predicated upon an economic concept of capital. Capital, in this context, elicits the ideas of investments in longer-term assets and of any resulting returns on such investments. In an economic development context, the concept of human capital has, as a result of the theory, become an important alternative to that of
either financial or physical capital. The concept of human capital raises the question of whether or not investments in formal education in both developed and developing countries generate returns that justify expenditures from the perspectives of the private individual and of the public at large.

In the early 1990s, empirical research began on human capital in the top journals of the entrepreneurship discipline. Cooper, Gimeno-Gascon & Woo (1994) morphed the human capital concept in order to test whether formal education and experience contributed to entrepreneurial success. The typical human capital analysis of related costs, financial benefits and returns on investment was eschewed in the research from the very beginning, in effect negating the ‘capital’ in ‘human capital’.

From 1994 until the end of 2008, Entrepreneurship scholars generated fifty-two human capital-related articles in the top three journals in the field of Entrepreneurship. Four additional articles linking human capital to entrepreneurship were published in leading Management journals. From any perspective, the volume of articles represents a substantial investment in human capital research by the top journals. It is only fitting that after all this work a review of the empirical status of Human Capital Theory in the field of Entrepreneurship should be forthcoming.

**Human Capital Theory**

Human capital is an economic concept comparable to the factors of production associated with classical Economics. In the 1960s, a number of scholars developed a testable theory of human capital in order to examine the economic returns of, inter alia, education and
work experience. The work resulted in a Nobel Prize for one of the key scholars, Gary Becker, in 1992.

This section provides an overview of the history and development of Human Capital Theory, as well as the criticism levied against it. The following sections briefly explore the empirical treatment of Human Capital Theory in the field of Entrepreneurship with a focus on useful knowledge and insight.

**History and Overview**

The origins of thought with respect to the economic relevance of human knowledge and abilities can be traced back a couple of centuries. The most prominent economist to describe the relationship is Adam Smith (1776) who argued that wealth was driven by two components of human productivity: 1) acquired and useful abilities derived from skill, dexterity and judgment, and 2) abilities acquired from education, study and apprenticeship. Though other well-known economists made contributions to the notion of human capital, Human Capital Theory (HCT) is considered to have originated in the 1960s. In October of 1962, *The Journal of Political Economy* published articles that established the legitimacy of the following human capital factors: education, labor market experience, migration, healthcare, and job search.

At the very core of Human Capital Theory was an assumption that investment in human beings pays off in economic terms at both the micro (individual) and macro (societal) levels. Micro-level HCT assumes that an individual makes a rational investment decision based on expected annual return, the cost associated with an
investment, the labor force time required to recoup the investment and the discount rate, (that is the value of present versus future earnings). It also assumes that there exists a curvilinear relationship between age and amount of human capital and that individuals who expect to spend substantial time away from the labor force will invest less in human capital. The law of diminishing returns has also been found to apply (Schaffer, Deller & Marcouiller, 2004). Macro-level Human Capital Theory contends that governments take into account human capital development costs when making decisions with respect to the sustainability and growth of gross national and domestic products.

The two human capital investments that stand out as most relevant to the field of Entrepreneurship are experience and education. These two types of human capital investments have been investigated heavily in Economics. In the 1960s Jacob Mincer, considered the father of modern labor economics, began to examine private returns to on-the-job training (that is, work experience) and formal education. At the same time, Gary Becker examined key factors contributing to US economic growth beyond the explained variance attributed to physical capital and labor. Inspired by census data indicating a positive return to education, Becker argued that individuals and organizations purchase education, training and healthcare with a view to the future. He indicated that increases to human capital lead to individual payoffs in the form of higher wages and to macro-scale returns in the form of economic growth.

The vast amount of HCT research (Blaug, 1978) led to reviews by different scholars (Blaug, 1976; Maglen, 1990). The results, which challenge different aspects of HCT, are presented in the next section.
Criticism

In the 1970s, Economist Mark Blaug reviewed the empirical status of Human Capital Theory. He (1976) found that:

1. high-achievement-oriented students are less motivated by economic factors such as rates of return to education than cost-conscious, low-achievement-oriented students;
2. European students do not become informed about labor market earnings patterns in order to make decisions about post-compulsory education;
3. some Philippines students were willing to undertake college-level programming associated with negative rates of return; and,
4. the rates of return to individuals tend to decline monotonically with more schooling.

The review called into question some of the key beliefs about individual investment behavior towards, and the payoffs associated with, post-secondary education. Further, the review provided evidence in favor of the consumption hypotheses, a competitive framework, and it failed to defeat a third competitive perspective known as the screening hypothesis, which suggests that education is used by employers to filter job applicants. Blaug (p. 849) conjectured that the human capital research stream appeared to be in a crisis.

In the 1980s, a resurgence of interest in HCT occurred, driven mainly by a move toward quality and effectiveness of teaching resources and a market-oriented approach to education. According to Williams (1987, p. 153), the redirecting and re-energizing of the field yielded no better gains: “...the guardians of traditional theory have not allowed persistent empirical irregularities to dampen faith in the essential correctness of the human capital hypothesis...human capital theorists have countered the growing plethora
of potentially damaging data with modifications intended to generate hypotheses more compatible with extant evidence.”

In 1990, Leo Maglen systematically reviewed the empirical evidence related to individual rates of return. He found the micro-economic evidence to be fragmentary and inconclusive. It indicated some support for the attainment of lowers levels of education in developing countries, but not for the higher education of manufacturing and service-sector workers in developed countries. Maglen (1990, p. 291) also reviewed the evidence for the link between education and macro-economic growth and found it to be particularly weak: “Neither time-series nor cross-country studies lend much support to the contention that increased education promotes the growth of labor productivity.”

On Human Capital Theory, Blaug (1994, p. 19) ultimately concluded: “…not that human capital is wrong, but that it is thin and unproductive despite its early promise.” In spite of the critical reviews, many in the Economics of Education field have continued to carry the HCT torch. The behavior may stem, in part, from a deeply-held belief that investments in education must provide increasing rates of return.

**Research Method**

**Data and Sample**

In order to examine the empirical status of Human Capital Theory in the field of Entrepreneurship, the research here focuses on empirical research published in the top three Entrepreneurship journals and in three top Management journals. The journals are listed in Table 1 below. The Management journals are included because they are viewed as effective outlets for Entrepreneurship research.
For the Entrepreneurship journals, every article of every issue was examined. For the Management journals, a key word search via Business Source Premier was used to narrow the results to only those articles containing the terms ‘entrepreneur*’ and ‘human capital’. The term ‘human capital’ was used rather than ‘human capital theory’ in order to capture as many related articles as possible during the search process.

Procedure

The research process undertaken for this study represents a subset of a larger study on the use of theory in the top three Entrepreneurship journals. The larger study involved the grouping of articles into one of three categories: conceptual; theory-driven empirical; and, non-theory-driven empirical. In order to distinguish conceptual from empirical, an empirical article was defined as involving the collection, analysis and interpretation of data. Such articles typically included Method and Results sections. An electronic spreadsheet was used to track the number of conceptual and empirical articles; the number of theory-driven articles; the total number of theories used; and, the frequency of theory usage.

All of the articles were available in Adobe PDF format from Business Source Premier. Many PDF files were in a format that allowed the Find function (Ctrl+F key) to search for text in the body of articles. In such cases, the search process was quite
An article had to overcome two hurdles to be coded as theory-driven empirical. The first hurdle involved the identification of a theory. For an article to use a theory, the theory had to be described prior to its Research Methods section. Initially, the term ‘theor’ was sought via the find function in each PDF file. In PDF files that would not allow the Find function, a manual review was undertaken. The majority of theories were labeled quite clearly. All of the theory-driven empirical articles that used Human Capital Theory are analyzed in this article.

The process for the three Management journals followed the same protocol as above. The search for articles containing keys words yielded a very small number of results and hence, the process was extremely efficient.

The second hurdle represented explicit communication of at least one hypothesis. The term ‘hypothes’ was sought when the Find function was available. Otherwise, a manual review occurred. In many cases, hypotheses were clearly separated from paragraphs. In a very small number of cases, hypotheses were communicated within paragraphs. If any or all hypotheses were presented after a Research Methods section, the article was not deemed theory-driven empirical. The explicit and sequential style described here is considered to be consistent with scientific method and theory-driven research.

Once the database of Human Capital Theory-driven empirical articles was complete, a coding of the hypotheses contained in each article took place. The total
number of hypotheses, including sub-hypotheses, in the 56 articles is 439. The method of recording hypotheses partially accounts for the high average number of hypotheses per article. Researchers often bundled a number of separate propositions together into one hypothesis. For example, the hypothesis that level of education might be related to firm performance might include a number of measures of firm performance. Since the results of the testing might vary from measure to measure, it was decided to separate the original hypothesis into a number of sub-hypotheses – each one related to a separate measure. Thus, the hypotheses in each article were reviewed carefully in order to capture the results of all the separate relationships tested, rather than generally reporting on only the overall results.

Moreover, hypotheses were coded according to the implicit theory that they represented. If a hypothesis predicted a positive relationship between formal education and firm performance, it was so coded. If it predicted a negative relationship it was coded in a different category. Further, the hypotheses that predicted that a relationship between formal education and firm performance would be modified by a third variable were coded in another category. All together, 10 different categories or theory variants were identified in the dataset. It is important to note that in each category there is substantial implicit theoretical diversity owing, in part, to numerous moderating and mediating variables. The analysis, reported below, also revealed a wide variance in the number of hypotheses per theory variant. In addition, the analysis uncovered an article, categorized in the Team Models variant, containing 68 hypotheses.
Results

The analysis of each article in the dataset revealed how Human Capital Theory is being used in the top Entrepreneurship and Management journals. The research uncovered 10 variants of HCT. Each is described below. It should be noted that the first two variants are conventional variants from the field of Economics and that they were not found to exist in the current dataset.

Human Capital Theory: This theory predicts that both formal education and/or workplace education (called experience) will directly impact personal career performance to the extent that the related financial gains will exceed the related costs and yield a financial return on such investments in people over their careers. This theory is a general theory that has micro and macro implications, predicting positive rates of return across the entire spectrum of careers for individuals as well as a positive rate of return on a societal level of investments in education for society as a whole.

Human Capital Theory with Diminishing Returns: This theory is the same as HCT other than for predicting a reducing rate of return on increasing investments in education and experience.

Increasing Human Experience Model: This variant is our name for the model implicitly proposed by Cooper, Gimeno-Gascon and Woo in their 1994 (Cooper variations) article that appears to have inspired the program of nominally-named human capital research in the field of entrepreneurship. The human experience model predicts that more formal education and more work experience will yield higher levels of entrepreneurial performance. In this model no attempt is made to measure the related costs, the financial benefits or the rate of return either to the individual or to society. An example hypothesis, from Cooper et al. (1994, p. 376), is “Probabilities of marginal survival and growth increase with levels of education.” In most cases this theory might be viewed as a primitive form of Human Capital Theory that may be a precursor condition to finding a positive human capital relationship in an entrepreneurial context (depending on the performance measures chosen).

No Effect & Decreasing Human Experience Models: This model predicts the opposite direction of effect of the Cooper 1994 model, namely that increasing amounts of experience will have either no impact or a deteriorating impact upon entrepreneurial performance. An example hypothesis, from Lerner, Brush & Hisrich (1997, p. 325), is “The influence of previous start-up experience will have no association with business performance.” It is a clear departure from the Human Capital Theory proposed in the field of Economics. The following variations also represent departures.
Curvilinear Models: This model predicts curvilinear relationships between formal education and experience, and entrepreneurial performance. An example hypothesis, from Allen, Link & Rosenbaum (2007, p. 941), is “Older faculty are more likely to patent with industry than younger faculty, to a point and then the impact of age will decrease.”

Moderator Models: This is an umbrella concept for hypotheses that include formal education and experience in predictions about entrepreneurial performance but involve moderators and interaction effects in their predictions. An example hypothesis, from Wright, Liu, Buck & Filatotchev (2008, p. 137), is “The SMEs of returnee entrepreneurs possessing more patents perform more strongly in a nonuniversity park than in a university park.”

Gender Differences: These models predict differences in human capital or differences in entrepreneurial activity based on differences in human capital between women and men, and are as such, a special case of moderator variables. An example hypothesis, from Langowitz & Minniti (2007, p. 345), is “Across all countries in our sample, sociodemographic variables explain a significant portion of the differences in the propensity to start a business across genders.”

Mediator Effects Models: This umbrella concept encompasses models that predict outcomes that we view as intermediate to entrepreneurial performance. An example hypothesis, from Powers & McDougall (2005, p. 298), is “The quality of a university’s faculty will be positively related to the number of start-up companies formed.”

Moderator/Mediator Combination Effects Models: These models predict that moderators will impact intermediate-level outcomes. An example hypothesis, from Zhang, Souitaris, Soh, & Wong (2008, p. 598), is “The similarity of the industrial sectors between entrepreneurs’ prior employment and their new ventures is positively correlated with their propensity to use existing networks when approaching initial investors.”

Outsider Participation Effects Models: This umbrella concept encompasses a variety of predictions about the positive impact of a variety of outsiders (with their related human capital) upon entrepreneurial performance. An example hypothesis, from Jain and Tabak (2008, p. 28), is “Venture capital participation reduces the probability of founder CEO at IPO.”

Team Models: This is another umbrella concept for different models for combining the education and experience of entrepreneurial team members as the basis for predictions of entrepreneurial performance. An example hypothesis, from Westhead, Wright, & Ucbasaran (2001, p. 341), is “Ventures with two or more partners/shareholders are more likely to be exporters seven years later.”

Difficult to Classify: The hypotheses in this category were unusual. Authors generally claimed to be investigating human capital relationship variables and their proposed relationships made them difficult to classify in the above-listed categories. An example hypothesis, from Corbett (2007, p. 104), is “Increased levels of specific human
capital will moderate, in a positive manner, the relationship between the comprehension information acquisition and the number of opportunities identified.”

Table 2 below presents the 12 theory variants along with the number of hypotheses and articles associated with each variant. Somewhat surprisingly, articles often advance predictions pertaining to more than one of the theory variants, and as a result the total number of articles reported in this table is greater than the number of articles reviewed.

Two key observations can be drawn from Table 2. The first observation is that none of the hypotheses is categorized under Human Capital Theory or Human Capital Theory with Diminishing Returns. None of the articles in the data set is concerned with measuring the costs and benefits in financial terms or in calculating the rate of return on investments in formal education or experience over time despite the fact that many of the authors appear to recognize the economic origins of the theory. An analysis of reference sections reveals that twenty-six articles (46.4 percent) cite Gary S. Becker’s work (1964, 1971, 1975, 1980, 1993 and 1994). Further, seven articles (12.5 percent) and five articles (8.9 percent) cite works by Jacob Mincer (1974, 1986) and Theodore W. Schultz (1959, 1961, 1980), respectively.

The second observation is that seventy-eight (17.8 percent) of the hypotheses in fifteen articles (26.8 percent) fall into the Increasing Human Experience Model (IHEM), which suggests that more formal education and experience should increase entrepreneurial performance. The IHEM is considered to be the best proxy for Human
Capital Theory and accordingly, its key variables, formal education and experience, are investigated more thoroughly in the proceeding sections. They are followed by some additional observations about the chart above.

**Formal Education**

Does it pay for an entrepreneur to get a formal education? Since no studies address this question we can only approach it indirectly. Since the only studies that address the value of formal education within the human capital literature cited here focus on post secondary education, we can say nothing about the value of formal education at the primary and secondary level. The most direct question about education that this literature tackles is whether the amount of formal education that an entrepreneur possesses is related to higher levels of entrepreneurial performance. Some articles (that is, Cooper variations) address this issue indirectly and might be called indirect tests of a human capital surrogate measure. If entrepreneurs with higher levels of formal education have consistently and substantively higher levels of entrepreneurial performance then we might expect that there is a reasonable likelihood that formal education pays for entrepreneurs, although it would make sense to test the original human capital theory directly.

This section is broken down into two sub-headings: Indirect Tests and Other Tests of the theory variant that formal education contributes to entrepreneurial performance. The Indirect Test results include the results of all of the Cooper variation hypotheses. The Other Test results make the generalized assumption that all of these A-level
publications are testing something relevant to human capital despite their formulations. The results are the author’s conclusions as to whether or not their hypotheses were supported. Needless to say, the Other Test results are dubious in the extreme when it comes to making pronouncements about the impact of formal education upon entrepreneurs. However, it is important to be able to say something about the fecundity of research across these variant theories. What is presented is the overall result of the effectiveness of theory variant testing in the entrepreneurship field. Although formal education tends to be measured somewhat similarly across studies as the number of years of post-secondary education, the sample populations and the dependent measures vary dramatically. In the case of the Indirect Tests, a small number of studies could not be used because the independent variables were based on factors constructed of both education and experience variables (for example, Rauch, Frese & Utsch, 2005).

*Indirect Tests.* Table 3 below indicates that nineteen of the tested Cooper hypotheses (76 percent) did not find a relationship between formal education and any one of a number of different measures of entrepreneurial performance. Of the seven hypotheses that found a relationship (27 percent), only one reached a $p \leq .001$ level of significance. Of the two $p \leq .01$ level findings, one was negative, or the opposite of that predicted.

---

Table 4 presents the findings at each level of statistical significance. The strongest evidence for the efficacy of formal education is represented by a single finding
with business survival as the criterion variable. The second strongest evidence of a relationship provides mixed results (negative and positive) for the relationship between formal education and venture performance.

Other Tests. Table 5 below indicates that ninety-six hypotheses involved the testing of education as an independent variable. Twenty-six of the hypotheses (36.1 percent) were found to be supported. Forty hypotheses (55.6 percent) failed to find support and six hypotheses (8.3 percent) found a negative relationship, the opposite of that predicted.

A summary of the positive and statistically significant findings is presented in Table 6 below. It provides insight into the extent of statistical significance and the number of hypotheses at each level. The calculations do not include the six statistically significant negative findings reported in the table above. A question mark is used for cases in which authors verbally indicated a statistically significant relationship, but did not communicate the level. Only one finding reached a $p \leq 0.001$ level of significance.

The Other Tests include a wide variety of dependent variables such as the timing of a new product move, entry into self employment, firm absorptive capacity, perceptions of business success and growth expectancies.
Experience

Following the format of the Education section above, this section reviews results of the Indirect Tests and the Other Tests. Again since there were no real tests of Human Capital Theory amongst the hypotheses testing experience the Cooper variant was used as the best amongst a set of weak proxy theories.

*Indirect Tests.* Of forty-seven hypotheses that tested the relationship between some measure of experience and some measure of entrepreneurial performance, 62 percent failed to support the hypotheses. Of the eighteen hypotheses that found a relationship, four reached a $p \leq 0.01$ level of significance. Table 7 below reports the findings.

Table 8 presents the findings at each level of statistical significance. The four strongest findings suggest that 1) business failure is mitigated via prior work experience in a similar industry; 2) prior new venture experience positively influences revenues; 3) prior similar business experience positively influences the amount of money that an entrepreneurs draws from a business; and 4) prior similar business experience substantially reduces the odds of exiting a new venture. Additional findings at the $p \leq 0.01$ level suggest that work experience reduces the chance of failure and increases the probability of revenue growth and firm profitability. However, the types of work experience that influence success are not made clear from the findings. It is interesting to
note that there is evidence, albeit weak, that prior management experience hurts new venture survival probability.

Other Tests. Table 9 below indicates that two hundred and sixteen hypotheses involved the testing of experience as an independent variable. Eighty-six hypotheses (39.8 percent) were found to be supported. One hundred and twenty hypotheses (55.6 percent) failed to find support and ten hypotheses (4.6 percent) found a negative relationship.

A summary of the eighty-six positive and statistically significant findings is presented in Table 10 below. Fifteen findings reached a p ≤.001 level of significance.

The Other Tests include a wide variety of dependent variables such likelihood of patenting with industry, probability of engaging in portfolio entrepreneurship, propensity to use network ties, and likelihood of being an exporter seven years later.

Discussion

The research findings provide several discussion points. The first point is the vast diversity of implicit theories that are actually tested. The 10 new theory variants indicate that researchers imagine an incredible array of competing theories that involve education,
experience and entrepreneurship. Most of the theories are largely unrecognizable as Human Capital Theory. It is unclear why researchers choose not to test the theory in its original form. It is also unclear why so many variations exist. One possibility is that researchers believe that if they try enough different permutations and combinations of data they will eventually discover something. This behavior fits Paul Feyerabend’s ‘anything goes’ anarchist approach to science. It could even be called dust-bowl empiricism. It certainly is not theory-driven research demanded by top journals.

The second discussion point is the usefulness of Human Capital Theory in the field of Entrepreneurship. It is obvious that the theory is not being tested properly. The costs of formal education and work experience are not included in empirical research. However, if the indirect tests return extremely strong results for formal education and work experience, a stronger rationale exists for remaining buoyant about Human Capital Theory. The indirect test of formal education does not promote the efficacy of formal education. Entrepreneurship success is not indicated by increases in formal education.

The indirect test of experience is not quite as straightforward. Thirteen hypotheses support a positive relationship at or beyond the 0.01 level. However, twenty-nine of the hypothesis tests (62 percent) do not indicate a relationship. Five hypotheses (10 percent) at or below the 0.05 level indicate a weak relationship. Ultimately, the evidence is still far from strongly supportive.

The third discussion point is the possibility that the results here are not surprising to many who have observed both the academic and entrepreneurial milieus. On the academic side, some published review studies have found questionable support for popular theories such as Transaction Cost Economics (c.f., David and Han, 2004). On
the practical side, many observers would have already been doubtful of the applicability of the human capital thesis within an entrepreneurial context given the large number of famous entrepreneurs who have built business empires without the benefit of either much formal education or much prior business experience.

The fourth discussion point is that there may be a productive way forward from the human capital research results. An untapped area that may provide high explanatory power is auto-didacticism. There are accounts of self-educated entrepreneurs on the World Wide Web. Such auto-didactics purportedly learn what is needed just before, or at the time that, it is needed, rather than via learning models characteristic of the formal education system.

Conclusions

There are at least two important conclusions that can be drawn from this paper – one methodological and the other substantive.

The methodological conclusion: To the degree that this paper is illustrative of theory testing in different spheres of the social sciences, it raises concern about current practice. When Meehl (1990) referred to the tendency of psychologists to conflate theory testing with hypothesis testing he may have been characterizing a vast array of dubious practice in a number of social science fields.

The array of dubious practice that comes from a poor understanding of theory testing is of substantial concern. The researchers did not appear to appreciate that they were not actually testing Human Capital Theory despite allusions to it. That some would draw hypotheses in the opposite direction of the theory and still imply that it was a test of the theory illustrates how extreme the problem is.
Not one scholar seemed to appreciate the questionable or problematic aspects of the theory, and some acted as if it were already ‘proven’, and thus only required elaboration. No one article expressed skepticism based on the mass of contrary observations of famous entrepreneurs with limited formal education and limited experience, or on the large number of unsupportive findings to date. The narrative reviews of existing evidence in these articles was next to useless – apparent exercises in cherry-picking – as most were able to find a few studies that contained evidence generally supportive of human capital in an entrepreneurial context. Even the non-supportive and negative findings failed to alert them to the possibility that human capital theory might not be applicable within the field of entrepreneurship.

It would also appear that researchers not only conflate theory with hypotheses but also that they conflate novel ideas with creative ideas. The theory of human capital was morphed in so many different directions perhaps out of a need to be original when the real demand is that the research be creative. Many, many implicit theories were advanced in greatly varied hypotheses. The rationale for advancing the hypotheses was typically skimpy. In fact, viewed across all of the studies, the entire exercise appears to have been a massive fishing expedition under the guise of theory testing.

The substantive conclusion: It would appear that Human Capital Theory may need to be modified for the entrepreneur. Considering that Human Capital Theory is first and foremost a theory of economic development, it is of noteworthy significance that the entrepreneur – oftentimes regarded as the most important agent of economic development – doesn’t appear to be subject to Human Capital Theory, at least as far as formal education is concerned. This observation suggests a need for a major ad hoc adjustment.
in the theory. It also raises very important questions as to why entrepreneurs would tend to be an exception. It would appear that the field of Entrepreneurship is in a position to make a substantial contribution to the field of economic development if scholars are able to get a handle on this problem.

Thomas P. Kenworthy
Thomas completed his doctoral training in Entrepreneurship at the University of Calgary in 2008. He is currently an Assistant Professor of Entrepreneurship at Suffolk University in Boston, MA. His focus is on understanding the knowledge generated through extant entrepreneurship research.

W. Edward McMullan
Ed began his relevant career as a student entrepreneur in the 1960’s. He obtained his MBA and PhD from UBC and began teaching at the University of Calgary in 1973. Since then he has had around 80 different articles published in a variety of journals. His area of persistent scholarly interest has been entrepreneurship education and support, and entrepreneurship theory. In 1990, he wrote a book providing an integrated, mid-range theory of entrepreneurship. He has since conceived and designed a general scientific theory of entrepreneurship which is now in manuscript form.
BIBLIOGRAPHY


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### TABLE 2
Human Capital Theory Variants

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<td>Increasing Human Experience Models</td>
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<td>No Effect &amp; Decreasing Human Experience Models</td>
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<td>Curvilinear Models</td>
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<td>Moderator Effects Models</td>
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<td>Moderator/Mediator Combination Effects Models</td>
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<td>2</td>
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<tr>
<td>Outsider Participation Effects Model</td>
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**TABLE 3**
Indirect test of Cooper Variant (Education)

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<td></td>
<td>0.001</td>
<td>0.01</td>
<td>0.05</td>
</tr>
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### TABLE 4
Statistically Significant Findings of Indirect Cooper Variant (Education)

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<tr>
<th>Level</th>
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<tbody>
<tr>
<td>.001</td>
<td>Education increases the probability of business survival (Cooper et al., 1994)</td>
</tr>
<tr>
<td>.01</td>
<td>Education is NEGATIVELY related to self-reported venture revenue (Lerner &amp; Haber, 2001)</td>
</tr>
<tr>
<td>.01</td>
<td>Formal education is positively related to economic performance of a venture (that is, money taken out by entrepreneur) (Gimeno et al. 1997)</td>
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<tr>
<td>.05</td>
<td>Education positively influences firm profitability for women-owned firms (Coleman, 2007)</td>
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<td>.10</td>
<td>Possession of a bachelor degree is positively related to business survival (Westhead, 1995)</td>
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<tr>
<td></td>
<td>Possession of a bachelor degree is positively related to employment growth (Westhead, 1995)</td>
</tr>
<tr>
<td></td>
<td>Education increases the probability of business growth (Cooper et al., 1994)</td>
</tr>
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### TABLE 5
Other Tests of Cooper Variant (Education)

<table>
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<tr>
<th>Support Hypotheses?</th>
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<th>Negative</th>
<th>Total</th>
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<td><strong>%</strong></td>
<td>36.1%</td>
<td>55.6%</td>
<td>8.3%</td>
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TABLE 6
Statistical Significance of Other Tests of Cooper Variant (Education)

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<th>Level</th>
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<td>?</td>
<td>9</td>
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<td>0.1</td>
<td>1</td>
<td>4%</td>
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<td>0.05</td>
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<td>0.01</td>
<td>9</td>
<td>35%</td>
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<tr>
<td>0.001</td>
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<td>4%</td>
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### TABLE 7
Indirect test of Cooper Variant (Experience)

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<th>Relationship?</th>
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<tr>
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<td>No</td>
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### TABLE 8
Statistically Significant Findings of Indirect Cooper Variant (Experience)

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<th>Level</th>
<th>Finding</th>
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<tr>
<td>.001</td>
<td>Industry experience reduces the probability of business discontinuance (Carter et al., 1997)</td>
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<td></td>
<td>Prior entrepreneurial experience has a positive impact on firm revenues (Haber &amp; Reichel, 2007)</td>
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<td>Similar business experience is positively related to economic performance of a venture (that is, money taken out by entrepreneur) (Gimeno et al. 1997)</td>
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<td>Similar business experience has a strong, negative relationship to exit (Gimeno et al. 1997)</td>
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<td>Work experience influences firm profitability for women (Coleman, 2007)</td>
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<td></td>
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<td>Work experience influences firm growth for men (Coleman, 2007)</td>
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<td>Failed entrepreneurs have less business experience than operational entrepreneurs (van Gelder et al. 2007)</td>
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<td>Entrepreneurial parents positively influence the probability of business survival (Cooper et al. 1994)</td>
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<td>Previous experience in a similar industry increases the probability of business survival (Cooper et al. 1994)</td>
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<td>Prior startup experience reduces the probability of business discontinuance (Carter et al. 1997)</td>
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<td>Work experience positively influences firm growth for women (Coleman, 2007)</td>
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<td>Previous employment experience is positively related to profitability of women-owned firms (Lerner et al. 1997)</td>
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<td>Entrepreneurial family background is positively related to self-reported venture revenue (Lerner &amp; Haber 2001)</td>
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<tr>
<td>.10</td>
<td>A key founder with a management position during previous employment is NEGATIVELY related to business survival (Westhead, 1995)</td>
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<td>Management experience is positively related to economic performance of a venture (that is, money taken out by entrepreneur) (Gimeno et al. 1997)</td>
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**TABLE 9**  
Other Tests of Cooper Variant (Experience)

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Human Capital in Entrepreneurship
TABLE 10
Statistical Significance of Other Tests of Cooper Variant (Experience)

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Entrepreneurship Outcome Variables

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</tbody>
</table>
### TABLE 12

**Additional Entrepreneurship Outcome Variables**

| Probability of academic patenting with industry | Number of university start-ups formed |
| Complexity of the loan granting decision process | Number of IPO firms that licensed technology from a university |
| Bank loan approval rate | Success at closure |
| Probability of being an entrepreneur versus an intrapreneur | Strategy of quality / customer service |
| Differences in propensity to start new ventures between men and women | Strategy of innovation |
| Probability of engaging in portfolio entrepreneurship | Acquisition capabilities |
| Probability of using an independent firm as the organizing mode for portfolio entrepreneurship | Assimilation capabilities |
| Propensity to use existing networks when approaching initial investors | Intended scale (by revenue) of venturing activity |
| Probability of network utilization | Motivation to continue and grow business operations |
| Probability of founder still with firm at IPO | Hotel occupancy and customer satisfaction |
| Order of a new product move | Tourism and business strength |
| Timing of a new product move | Probability of post-IPO profitability |
| Probability of being a first mover versus an imitator | Time to profitability |
| Relative importance of human capital in an entrepreneurial board | Amount of equity versus debt |
| Probability of being laid off during a recession | Self-employment intentions |
| Failed versus operational business owners | Firm debt level |
| Decision to franchise | Team member entry |
| Initial capital provided by founder | Team member exit |
| Export status in 7 years | Growth expectancies |
| Opportunity exploitation | Innovation radicalness |
| Opinion about venture success | Business strategies |
| Home runs in venture capital portfolio | Location decision (university science park or non-university park) |
| Strike outs in venture capital portfolio | Founder's threshold level of performance |
| New tie (that is, partnership) between two firms | Speed of strategic decision making |
Utilizing a resource-based theory (RBT) base, this study attempts to uncover resource conditions common across social entrepreneurial ventures. This study differs in that it builds on the RBT and the entrepreneurship literature by expanding an existing framework to evaluate competitive advantage in the social entrepreneurial context and propose two additional factors related to the concept of social rents in order to achieve a more suitable outcome. This is defined as sustainable contributive advantage. Social rent generation and conversion is a primary factor involved when applying the rationality of RBT towards social entrepreneurial ventures (SEVs). A model has been developed around the newly proposed sustainable contributive advantage and the social rent aspect of this model will be presented in detail in order to demonstrate how this expanded lens facilitates a better identification of performance differences in social entrepreneurial ventures.
Introduction

Unlike the reasonably clear financial and market performance measures available in most entrepreneurship research, a standard performance metric for cross-comparison in social entrepreneurship has not yet emerged. Evaluation and comparison methods such as the triple bottom line, statements of functional expenses, and social return on investment calculations are gaining wider acceptance as tools for comparison, yet they do not give explanatory insight on what is happening inside these organizations. Admittedly, this has made analysis of social ventures challenging for researchers. We propose a framework for analyzing social venture performance, which is based on core frameworks and conceptualizations in both strategy and entrepreneurship.

Understanding firm success or failure is central in strategy (Porter, 1991) with a clear focus on firm success. The field of strategic management conceptualizes success as having a competitive advantage over other firms (Barney, 1991), which is manifested in a competitive position or series of competitive positions that lead to superior and sustainable financial performance (Porter, 1991). As social ventures appear to have measures beyond just financial performance due to the very nature of the venture, how then, do we begin to apply the concept of competitive advantage? Can the field of strategic management be applied to the world of social entrepreneurship? Is competitive advantage it at all appropriate as a concept to study a social venture?

Using elements of resource-based theory (RBT) to attempt to explain why some social ventures seem to perform better than others may be fruitful, as RBT lends a firm’s success to a firm’s resources and capabilities, rather than to external forces such as competition and the economy. As competition and economic issues are transformed through social entrepreneurship practices and business models, analysis of external forces can be helpful in grasping the
environment in which these firms operate. However, it does not address why and how some social ventures attain success and others fail. This is why RBT may be suitable in the context of social entrepreneurship. Entrepreneurship and resource-based theory adopt precisely the same unit of analysis – the firm resource (Alvarez & Busenitz, 2001). It is the analysis of social entrepreneurship resources that becomes the avenue to greater insight into these social ventures.

The paper begins with a review of social entrepreneurship, RBT and competitive advantage followed by a detailed description of Peteraf’s (1993) four cornerstones of competitive advantage. We then utilize Peteraf’s model in order to present the additional conditions of social entrepreneurship ventures (SEVs) through the concepts of social rents and sustainable contributive advantage. We conclude with a discussion of future research possibilities created by this expanded view.

**Literature Review**

**Social Entrepreneurship**

In general, the development of the research in social entrepreneurship has taken the same developmental path the research field of entrepreneurship took decades ago (Carsrud, Olm & Eddy, 1986). The definition of entrepreneurship has been debated in the similar way that scholars debate over what social entrepreneurship is and how it is defined today. Numerous perspectives about what social entrepreneurship is (and what it is not) have been developed. While many will argue that the existing research is not yet rigorous in nature, researchers have published more than 200 scholarly articles on the subject, nearly all since 2000 (Hill, Kothari, & Shea, 2008). Due to the current stage of development, it is helpful to use adjacent or similar fields of research as comparables or beginning frameworks. However, one should exercise caution when translating findings from research on the creation of economic entrepreneurial ventures (EEVs) directly to
the process of creating social entrepreneurial ventures (SEVs). It is as yet unclear as to how similar or different those processes may be (Dorado, 2006).

Many of the initial entrepreneurship studies examined personal traits, motivations, or network relationships (Gartner, 1988; Carsrud, Olm & Thomas, 1989). Similar studies of have emerged for individual social entrepreneurs (Steinerowski, et al, 2008) applying, for example, identity theory (Simms, 2006). Studies have examined what social entrepreneurs do and achieve for the community (Thompson, 2002), how exclusive the category of social entrepreneurship should be (Light, 2005), how social entrepreneurs rise from social welfare challenges (Leadbetter, 1997), how social entrepreneurs act as social change agents (Dees, 1998), and opportunity is recognized by social entrepreneurs (Townsend & Hart, 2008). Similarly, as the entrepreneurship research field developed, researchers are now beginning to focus on the social ventures, rather than just on the social entrepreneurs. For purposes of this study, we specify below what constitutes a social entrepreneurial venture (SEV) and what differentiates it from an economic entrepreneurial venture (EEV).

**Properties of Social Entrepreneurial Ventures**

When beginning to define a social entrepreneurial venture, there are two aspects that should be addressed. The first of these is what separates a social venture from a social entrepreneurial venture. The second of these is what separates an entrepreneurial venture from a social entrepreneurial venture. Clearly stating the distinctive properties of each of these defining characteristics of ‘social entrepreneurship’ are key to providing a clear lens as to how these social entrepreneurial ventures can begin to be analyzed and observed.

The first of these distinctions is to clearly separate a social venture from a social *entrepreneurial* venture. This distinction is similar to the popular argument that separates a small business from an entrepreneurial venture. Although there are many overlaps between
entrepreneurial firms and small business firms, they are different types of entities (Carland, et.al., 1984). Here, we present the perspective of Carland and colleagues that combines the work of Vesper (1980) and Schumpeter (1934) presenting four criteria that if observed in a firm’s actions, they can be classified entrepreneurial: (1) introduction of new goods (services), (2) introduction of new methods of production, (3) opening of new markets, or (4) industrial reorganization. In Table 1 we present four types of ventures within the context of this study: economic venture, economic entrepreneurial venture, social venture, and social entrepreneurial venture. We present this table to highlight the distinction between entrepreneurial vs. non-entrepreneurial ventures. The distinction between social and economic ventures will be further extended and presented in Table 2.

The second of these distinctions is what separates an economic entrepreneurial venture (EEV) from a social entrepreneurial venture (SEV). This distinction has been one of the more popular topics of discussion among researchers in social entrepreneurship. Many scholars have claimed that social entrepreneurship is a subset of entrepreneurship. The word ‘social’ simply modifies entrepreneurship (Martin & Osberg, 2007). In fact, the prefix ‘social’ itself is vague enough to create a situation where just about any venture could be called ‘social entrepreneurship’ (Zahra, Gedajlovic, Neaubaum, & Shulman, 2009). Mair and Martí (2005) discuss the term ‘social’ as somewhat misunderstood. They present the simplistic view of profit motives vs. altruistic motives and caution against thinking in this dichotomous nature. These two motives have been discussed at detail often through interviews or surveys of the entrepreneurs themselves (Neck, Brush, Allen, 2007).

We suggest that the differences between EEVs and SEVs should not be placed solely on the personal motivations of the entrepreneur. While the personal motivations of the entrepreneur
may determine whether the venture they pursue is more social or economic in nature, the personal motivations alone are not sufficient evidence to determine what kind of venture eventually develops. Individual motivations and founder intentions often change as the business grows, ages, dies, or makes other changes. Therefore, it is naïve to propose that at any given time, the purpose of any organization can be matched to the founder’s original intention of creating the venture.

For example, the founders of Whole Foods, a United States nationwide organic food supermarket, were four local businesspeople that decided the natural foods industry was ready for a supermarket format (Whole Foods Market, 2010). The founders launched Whole Foods because they saw a business opportunity in the market, not because they wanted to help alleviate world poverty. However, through their affiliated private foundation, that is exactly what they are doing. Among many other campaigns, Whole Foods most recently raised over 2.26 million dollars from its customers that will translate into over 12,200 micro-loans for women in developing countries (Whole Planet Foundation, 2010). This example begins to demonstrate how founder intentions can provide little insight as to the subsequent nature of the business at any given moment.

The term ‘social value’ is an area of vagueness worth noting. Some researchers have pinned the distinction of an SEV as one that creates social value of some kind (Peredo & McLean, 2006). Beugre (2007) claims the primary purpose of social entrepreneurs is to create superior social value for their clients, whereas the primary purpose of economic entrepreneurs is to create economic value. However, what is social value? At what point does the value a firm creates become social in nature? We define social value as: the *contribution to the welfare or well being in a given community that fills a need not currently being served effectively by a market (government or private sector)*.

To refer to Beugre’s (2007) claim, one could argue that there are many cases where
economic entrepreneurs provide superior social value for their clients in order to achieve superior economic returns. Whole Foods could be touted as example of this as their primary mission is to provide ethical, organic, and eco-friendly products for their clients and as a result they enjoy superior economic returns. The question then becomes, does this make Whole Foods an SEV? Some would argue that it is, so would argue that it is not. The point is the concept of social value creation is not a sufficiently deep or rigorous approach for examining the phenomenon of social entrepreneurship.

There are several positions that deserve mention at this point. Dees (1998) proposes that in social entrepreneurship, the social mission is explicit and central. Others describe social entrepreneurship as an entrepreneurial activity with an embedded social purpose (Austin, et. al., 2003) or an event where persons aim either exclusively, or in some prominent way, to create social value of some kind (Peredo & McLean, 2006). Still others classify it as organizations that are not owned by shareholders and do not pursue profit as their main objective (Leadbetter, 1997). Others see it as an innovative, social value creating activity that can occur within or across the non-profit, business, or government sectors (Austin, Stevenson, & Wei-Skillern, 2006). There are others that see it simply as taking a strategic approach to limit dependency on donations and government subsidies in order to become self-sufficient (Dorado, 2006).

As can be seen from the definitions above, social entrepreneurship has been described as an activity, an event, an organization, and a strategic approach. For our purposes in this study, we limit social entrepreneurship to the phenomenon of venture creation by the label social entrepreneurial ventures (SEVs). The key point is what makes these ventures distinctly social rather than economic. In order to do this, we propose that the unit of analysis is not the individual/founder, nor the organization itself, but the resources, processes and decisions of the organization, in line with resource-based theory.
In summary, we present our definition of social entrepreneurial ventures for purposes of this study to be: *A social entrepreneurial venture purposefully designs decisions and processes in order to create social value, grow the firm, and produce monetary returns in order to maximize their social value creation while simultaneously engaging in at least one of Schumpeter's four categories of behavior characterized by innovative strategic practices.*

By breaking down ventures into their decisions, resources, and processes, a comparison across social ventures becomes a more manageable goal. Within our definition, we admit that there are degrees among SEVs with regard to the extent they design their resources around social value creation (see Peredo & McLean, 2006; Neck, Brush, & Allen, 2007). We go beyond a typology approach in this paper to explore a mechanism at play within the SEVs. We expect that the differences between their resource allocations will match some of the previously proposed typologies. Using the frameworks presented, this study takes a step in that direction.

**Competitive Advantage and Resource-Based Theory**

Resource-based theory (RBT) posits that sustained competitive advantage derives from the resources and capabilities that a given firm controls (Barney & Clark, 2007). In addition, RBT posits that unique combinations of these resources and capabilities held by the firm are then mobilized to produce products and services that enable the firm to achieve sustainable competitive advantage (Barney, 1991; Grant, 1991). The theory suggests that there can be firm-level differences and it is within those differences sustained competitive advantage can be found (Barney, 2007). Therefore, RBT emphasizes the strategic decisions that the firm’s management make in regard to identifying, developing and mobilizing key resources in order to maximize returns and the theory been used to better understand the processes and strategic orientations of entrepreneurial ventures (e.g. Borch, Huse & Senneseth, 1999; Ray, Barney, & Muhanna, 2004).
In RBT, resources are an all-encompassing term, which includes capabilities, competencies, knowledge and resources (Barney, 2007). An additional key concept in RBT is the assumption of Ricardian rents (or efficiency rents). Ricardian rents are defined as earnings above breakeven that do not induce more competition (Peteraf, 1993). For example, more efficient firms are able to enjoy higher rents (profits) than competing firms because their operating costs are lower due to their highly efficient processes. When the price for goods drops, the more efficient firm will be able to stay in the market and the non-efficient (non-rent-generating firm) will be forced out of the market because the price exceeds the cost for production (Alvarez & Barney, 2004).

Peteraf’s (1993) model of competitive advantage from an RBT perspective, presented in Figure 1, is based on four necessary conditions that underlie sustained competitive advantage. These four cornerstones are described as superior resources (heterogeneity within an industry), imperfect resource mobility, ex-post limits to competition, and ex-ante limits to competition. The model takes a firm-level approach that has practical applications so managers can then take a resource-level view approach to their decisions (Peteraf, 1993).

It is important to note that Barney presented an earlier, better-known set of conditions for sustained competitive advantage that works complimentary to that of Petaraf (Peteraf & Barney, 2003). To have the potential for sustained competitive advantage according to Barney, a firm resource must be “(a) valuable, in the sense that it exploits/opportunities and/or neutralizes threats in a firm’s environment, (b) it must be rare among a firm’s current and potential competition, (c) it must be imperfectly imitable, and (d) it must be able to be exploited by a firm’s operational processes” (Barney, 2007). Barney’s attributes are commonly known as VRIO (valuable, rare, imperfectly imitable, and organization).
The primary difference between the two models lies in the heterogeneity characteristics of resources across firms. In Barney, ‘resource heterogeneity’ is a basic assumption that precedes his well-known VRIO framework (Barney, 1991, 2007). In Peteraf’s (1993) framework, ‘resource heterogeneity’ serves as one of the four ‘cornerstones’ of sustainable competitive advantage. Although resource heterogeneity is the source of rents in Peteraf’s model, she employs this term to signify a great deal more than just input differentials across firms (Peteraf and Barney, 2003). Therefore, Peteraf’s model fits the current study’s purpose because it is a value-based approach to competitive advantage and thus aids in the demonstration of new concepts and how they conceptually fit within the overall firm structure. While these two models of competitive advantage differ slightly, they both support an efficiency-based explanation of performance differences. They share common definitions of sustained competitive advantage, ‘value,’ and ‘rent’ (Peteraf and Barney, 2003). A resource-level and enterprise-level of analysis and view of RBV is supported by both of these models (Peteraf and Barney, 2003).

**Competitive Advantage as it Applies to Social Entrepreneurship**

A recent set of exploratory studies used elements of resource-based theory (RBT) to attempt to explain why some social ventures seem to perform better than others (Meyskens & Post, 2008; Meyskens, Robb-Post, Stamp, Carsrud, & Reynolds, 2010). They found that increasing partnerships were correlated with funding sources, which could imply that the more partnerships an SEV creates, the more opportunities they have to monetize the social value they create. Additionally it has been shown that the firm factors explained about twice as much variance in profit rates as did economic factors (Hansen and Wernerfelt, 1989). Whether or not this translates directly to SEVs is as yet unclear. However, as the analysis of economic and social outcomes across SEVs is challenging, an extension of what the concept of competitive advantage
looks like from an RBT vantage point within the world of social entrepreneurship is a necessary developmental step in research.

As SEVs must wrestle with both social and economic value, the concept of competitive advantage becomes highly problematic in this context. Social value creation as a priority in an SEV presents an interesting challenge in the context of competition. It is important to note at this point what social value creation is and is not in the context of a firm and for the purposes of this study. Social value creation by a firm is when the firm has done some work to create social value through programs, tasks, etc. Donating money or other resources to another organization is not social value creation (some may call it philanthropy). This distinction becomes important as we develop the concept of a ‘social rent’, which will be discussed later.

As mentioned earlier, the term ‘competitive advantage’ is somewhat challenging to apply to social ventures. ‘Competitive advantage' is typically defined as superior financial performance (Winter, 1995). For social ventures, this may simply not the case. For example, if the social goal is to end world hunger, the presence of additional SEVs to help conquer world hunger is often a welcome addition. The idea of capturing market share from competitors does not quite seem to fit. SEVs are, in a sense, fighting a social problem, not each other and collaboration is often a strategy these groups employ to tackle this larger social problem. However, competition does take place among these organizations. For example, if the source of funding, as a resource, is finite and scarce then multiple SEVs in a local market must compete for those funding resources.

An SEV is not simply judged on the funding sources they retain, as an EEV might be judged on their customer base, market share, etc. SEVs are judged on their ability to contribute to the solution to a social problem. EEVs are required to remain competitive, but SEVs are, in a sense, required to remain contributive. EEVs try to out compete one another in the marketplace. It could be stated that SEVs try to out contribute one another in the marketplace. SEVs strive to
contribute more by creating social value and they also strive to consistently enhance their ability to contribute.

**Sustainable contributive advantage.** In applying the concepts of RBT to social ventures, we offer a social entrepreneurship orientated description for sustainable competitive advantage. Sustainable competitive advantage in a social entrepreneurial context includes *sustainable contributive advantage*. An enterprise has *sustainable competitive advantage* if it is able to create more economic value than the marginal competitor in its product market (Peteraf and Barney, 2003). An enterprise has *sustainable contributive advantage* if it is able to consistently create more social value than the marginal contributor in its social problem area. The result of sustainable competitive advantage (more economic value) is what Barney and Clark describe as an economic rent:

“Value is expressed in terms of the difference between perceived benefits, or customer willingness-to-pay, on the one hand, and the economic costs on the other. This is, in essence, the same as the concept of *total surplus*, which equals the sum of the economic rents (*producer surplus*) and customers’ ‘value for the money’ or *consumer surplus*. The definition supports the notion that the value that an enterprise creates has the potential to enhance the welfare of all of its stakeholders (Barney and Clark, 2007:25).”

In the case of SEVs, they have chosen to serve an additional set of consumers that do not have the ability to pay regardless of their willingness to pay for perceived benefits. Yet, they still must wrestle with the economic costs of providing for those consumers. This is where the case of the ‘social rent’ presents itself. In essence, a social rent is *a perceived benefit or excess residual value that can be converted at a later time into a realized monetized value*. Whereas, economic rents are the actual returns (profits) to a factor in excess of opportunity costs (Barney & Clark, 2007: 28), social rents are the *potential* returns to a factor in excess of opportunity costs. The
social rents must be converted in order for the venture to experience monetary gains from the social rents.

In the case of the EEV, the perceived benefit of a product or service is assessed, converted, and realized by the purchaser during the transaction. The ideal situation is that the perceived value is greater or equal to the price set by the company and that price exceeds the costs of production. For example, the perceived value of a Mercedes-Benz automobile is inflated due to the brand image of the company, thereby producing larger profit margins. The economic rents for Mercedes-Benz are realized when the consumer agrees that their perceived benefit meets the price set for the automobile. They purchase the automobile for the set price and Mercedes-Benz earns economic rents due to their brand image, i.e. customers prefer their brand to others and are willing to pay for their preference. The customer pays for and enjoys the perceived benefit directly.

However, in the case of the SEV, the perceived benefit becomes a distorted concept. For example, the perceived value of a hot meal is not converted or realized when the homeless person agrees to consume it, regardless of how valuable the homeless person perceives the value to be. Therefore, the SEV has an additional step in their value creating and capturing process. The perceived benefit must be converted and realized by a party not directly enjoying the benefit the SEV is creating. It is the SEV’s responsibility to initiate and follow through on the conversion process of the social value. The SEV could increase the convertibility of their social rent through a number of tactics such as publicizing the event, partnering with another organization, or perhaps collecting data from the population.

In the example of a hot meal being served to a homeless person, the SEV could enhance the social rent (or increase the likelihood of converting the perceived benefit into a future monetized value) by partnering with a group of students studying social welfare so that they could
conduct research on the area (which could result in research grants) or by engaging a local
government official in the event (generating press coverage which could result in a future
sponsor). These two tactics are enhancing the social rent (perceived value) so that a party _not enjoying the benefit directly_ will be more inclined to assess and convert that social rent into a
realized monetary value.

If an SEV is able to achieve sustainable contributive advantage, it is able to utilize value-
creating strategies that enable it to grow from within and through its economic and social
resources it is able to generate transactions of creating both economic and social rents and
capturing value by monetizing social rents into new economic equivalents. These value-creating
strategies stem from the organization’s ability to acquire, utilize, and manage resources. As
valuable resources underpin superior performance, the resource-based view of the firm allows for
analysis of these social ventures at both the resource and enterprise view (Peteraf & Barney,
2003).

**Towards a Sustainable Contributive Advantage**

Integrating all of these frameworks together leads to a proposed model for sustainable
contributive advantage based on the resource-based view of the firm. Here we attempt to draw
direct and specific connections to the model presented by Peteraf (1993). We additionally
propose two new factors in the model in order to demonstrate the role of social rent enhancement
and conversion. We discuss each factor in turn as described by Peteraf (1993) and as
alternatively presented in here Figure 2. These are discussed in detail.

-----------------INSERT FIGURE 2 HERE-----------------

**Heterogeneity** The first of the cornerstones, heterogeneity, is an assumption, widely
accepted in RBT, that allows for firms with superior resources to earn rents (Peteraf, 1993). The
goal of maintaining the heterogeneity of the resources for EEVs is to create Ricardian rents.
SEVs also work to create Ricardian rents (economic value) for their organizations. Whereas in the case of EEVs, those rents typically become profit back to stakeholders SEVs reinvest in their organization in order to achieve marginal sustainability.

**Imperfect Mobility.** The activities that a social venture partakes in to utilize resources should be organized in such a way as to create use-specific or firm-specific resources that are uniquely valuable to the organization. Some examples of Ricardian rent-generating resources with imperfect mobility that are: operational procedures, human resource practices, or customer/donor/member bases. Many social organizations depend greatly on their recurring membership dues and therefore prize their paid membership database. This base, while transferrable, is not as valuable to another organization due to the historical relationship of the member with the original organization.

**Ex post limits to competition.** The third cornerstone Peteraf (1993) calls ex post limits to competition, refers to the things firms do (also known as isolating mechanisms) to preserve the heterogeneity of their resources after they have entered a market or established a position in a market. Ex post limits to competition become most applicable to social ventures when there are limited resources available to similar groups. For instance, if a number of SEVs are submitting to a foundation for the same pool of funds, the isolating mechanisms of the SEVs are what will prove the case to the foundation that certain SEVs should be funded over others. Examples of isolating mechanisms might be an alliance or a record of success.

**Ex ante limits to competition.** The final condition Peteraf (1993) describes is ex ante limits to competition. These are the those resources that are in place prior to firms establishing themselves as leaders in the market that will help to ensure their position in the market remains intact. According to RBT, as a firm develops a strategy, it is important to keep in mind both the returns of the strategy as well as the costs of implementing it (Barney, 1986). Returns on
strategies higher than the cost of implementation results from timing, knowledge, or luck (Ahuja, Coff, & Lee, 2005). Ex ante limits to competition describe the firm’s ability to estimate the future value of a strategy in the hopes that the costs of implementing that strategy are much less than the future value. Unless there is a difference between the ex post value of a venture and the ex ante cost of acquiring the necessary resources, the entrepreneurial rents are zero (Rumelt, 1987; Peteraf, 1993). An example for an SEV may be large equipment or a physical location that they expect will allow it to perform more efficiently.

As previously mentioned, we offer a social entrepreneurship-orientated and expanded description for sustainable competitive advantage. Sustainable *competitive* advantage in a social entrepreneurial context includes sustainable *contributive* advantage. In order to include the additional transactional challenges involved in an SEV, we propose two additional conditions for SEVs.

**Ex post limits to scarcity.** We propose a fifth condition referred to as ex post limits to scarcity. Similar to ex post limits to competition, ex post limits to scarcity are those resources or capabilities enable social rents to be converted into Ricardian rents (i.e. monetize social value). In line with RBT, we propose those resources should be highly tacit in nature, socially complex and path dependent similarly related to ex post limits to competition. However, unlike ex post limits to competition, that focus on securing Ricardian rents, ex post limits to scarcity focus on converting social rents in order to secure Ricardian rents. A dedicated and familiar employee’s rapport with constituents may fall under this category, as that relationship is key in converting the social rents created into a monetized value for the SEV. Additionally, a socially complex and historical relationship with a press agent may also fall under this category. This helps to ensure sponsors will pay for visibility associated with the social rent creation process. This condition
refers specifically to those resources that create and support the social rent conversion process and ultimately create Ricardian rents for the organization.

**Ex ante ability to scale.** Our sixth proposed condition for sustainable contributive advantage is ex ante ability to scale. This condition relates to ex ante limits to competition in that it describes the conditions of what must be in place prior to attaining a strong position. However, in the case of social ventures this condition focuses on the infrastructure in place to allow for growth and enhancement of the social rent. Ex ante ability to scale refers to an organizations ability to respond to demand in an efficient way in relation to the social value they create. In other words, it is those resources that allow an organization to generate consistent social rents (if not growing social rents) in the face of a high demand for services or products. It is those resources that allow for SEVs to create social rents more efficiently or effectively. Examples may be technology, social networks, or in-kind contributions.

**Discussion**

It is with the generation and conversion of social rents that the true nature of the social entrepreneurship venture presents itself. To what length does an SEV dedicate its resources toward the social rent process? Additionally, to what extent does an SEV dedicate its resources and decision-making processes toward social rent enhancement vs. social rent conversion? Perhaps most importantly, are they able to consistently convert their social rents? It is within this entrepreneurial ability to find new business models that shorten the conversion of social rents to grants, revenues, memberships or other economic equivalents that determines whether social entrepreneurial firms can achieve sustainability. But perhaps more importantly, the consistent conversion of social rents also allows social entrepreneurial ventures to grow.

In order for any organization to reap the benefits of a sustainable competitive advantage and enable possible growth, they must master the continuing process of creating value (rent
creation and enhancement) and capturing value (rent conversion). The ability of a company to organically sustainably grow must mean that it has mastered the internal practices or activities necessary to capture some of the value (economic or social) that it creates. In the beginning stages of development, a start-up firm creates more value than they capture and for a time period, operates at a negative cash flow. In order to be sustainable, it must move toward capturing more value. It accomplishes this by building the foundation that will support the value transactions.

Therefore, the goal of the entrepreneur becomes the creation a new venture that has an ability to organically grow with the value that it has created and has enough ability to capture value such that organic sustainable growth is possible. At its essence, entrepreneurship relates to the process of organizing unique resources in order to accomplish a closed system of economic value creation and capture sufficient to achieve marginal sustainability. Many start-up social entrepreneurial ventures also operate in an early induction period whereby they create more value than they capture. Some SEVs are never able to turn their processes around to enable it match their value creation and capture ratio and end up operating in a nonprofit starvation cycle (Goggins & Howard, 2009). The goal of SEVs then should be to form an economic transaction engine by which operational processes are created that facilitates the creation of social and economic rents.

This new model for sustainable contributive advantage presents a research framework for analyzing SEVs from an external perspective that circumnavigates the financial performance analysis challenges stated previously. It is often possible to observe the resource utilization practices and strategies employed by SEVs and determine their probability for success based on those practices and strategies. While this approach does not rely on financial metrics for analysis, future research efforts should make connections between the model presented here and the financial stability and service growth of SEVs. It is important that future research studies remain
cautionary in their choices for analysis, as RBT suggests studies on firms located in a single
industry as it helps to establish the link between the resources and strategies in question (Barney,

Studying the presence (or lack of presence) of the resource conditions proposed in this
study required for SEV success provides a model as well as a lens of analysis that holds not only
predictive power, but managerial power as well. The model provides a practical framework to
guide leaders of SEVs toward best practices, better systems, and newly framed objectives that
ultimately lead the organization to sustained contributive growth. It can also represent a decision
framework that allows leaders of SEVs to look at the impact of their resource acquisition
strategies from a resource level as well as a firm level.

Similar to the framework for sustained competitive advantage, the framework for
sustained contributive advantage ultimately empowers the social entrepreneur to run more
efficient and powerful ventures. The responsibility of the social entrepreneur to ensure their
social rents are convertible is a shift in perspective for some non-profit organizations, but it is a
healthy and necessary shift. It is through a sustainable venture that an entrepreneur creates and
manages transactions in the marketplace that allow for the venture to create more value than they
capture from the market. This is the case whether the venture is socially oriented or not.
Examining powerful and struggling SEVs in the context of the model presented here will uncover
tools, strategies, and practices that can further enable the social entrepreneur.
REFERENCES


Table 1  
Non-entrepreneurial Ventures vs. Entrepreneurial Ventures  
(Social and Economic)

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<tr>
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<th>Non-entrepreneurial</th>
<th>Entrepreneurial</th>
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<tr>
<td>Economic Venture</td>
<td>A small business venture is any business that is independently owned and operated, not dominant in its field, and does not engage in any new marketing or innovative practices (Carland, et. al., 1984).</td>
<td>An entrepreneurial venture is one that engages in at least one of Schumpeter's four categories of behavior: that is, the principal goals of an entrepreneurial venture are profitability and growth and the business is characterized by innovative strategic practices (Carland, et. al., 1984).</td>
</tr>
<tr>
<td>Social Venture</td>
<td>A social venture is any type of organization (non-profit or for-profit) that is independently owned and operated (non-government entity), not dominant in its field, and does not engage in any new awareness or innovative practices.</td>
<td>A social entrepreneurial venture is one that engages in at least one of Schumpeter's four categories of behavior: that is, the principal goals of an entrepreneurial venture are sustainability and growth and the venture is characterized by innovative strategic practices.</td>
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Table 2  
Social Ventures vs. Economic Ventures

<table>
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<th></th>
<th>Economic</th>
<th>Social</th>
</tr>
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<tbody>
<tr>
<td>Venture</td>
<td>Decisions and processes purposefully designed to grow the firm and produce monetary returns in order to maximize wealth creation.</td>
<td>Decisions and processes purposefully designed to create social value, grow the firm, and produce monetary returns in order to maximize their social value creation (wealth creation may also be a by product).</td>
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FIGURE 1
The cornerstones of competitive advantage (Peteraf, 1993)

FIGURE 2
Model of Sustainable Contributive Advantage
The study is based on the analysis of a large number of publications on social norms using Harzing’s publish or perish. It aims to explain what is meant by the term social norms and to give an account of social norms as an important element within entrepreneurial behaviour. Its’ goal is to suggest a model that explains this connection by making a proposition that social norms affect attitudes toward success, failure and trying. If it is possible to affect these attitudes, it could stimulate entrepreneurial spirit and create new companies. The intention models are widely used and tested (e.g. Ajzen 1985, 1991; Krueger 1993; Krueger et al. 2000) but they still leave some questions about behaviour and the factors that influence it. Ajzen and Fishbein modified their model as recently as 2005. Their latest model presents background factors and normative and behavioural beliefs.

“While accepting the caveat that it is not easy to change attitudes…there are a number of areas where Finland needs to challenge what arguably are perceived as accepted norms of economic behaviour”

Evaluation of the Finnish national innovation system 2009 p. 186

Introduction

Entrepreneurship is about creating companies which contribute to regional development and thus serve, as sources of economic growth (Shane and Venkataraman 2000). To foster this
process it is important to understand: Why do certain people want to start their own company and others do not? Why and under what circumstances do these people start a company? How do entrepreneurial intentions emerge?

There can be little dispute that social norms are an area of importance in the field of entrepreneurship research, yet there have been no literature reviews on this topic. Examination of the articles quickly showed the lack of definitions among the articles that was studied. The current paper looks at both theory and empirical evidence from the entrepreneurship and social-psychological literatures in order to analyse why the content of social norms is important for entrepreneurial intentions. This conceptualisation will show that instead of using such socially defined variables as subjective norms, group norms or group identifications, we could use the variable social norms. It has been suggested that one reason why the subjective norm construct tends to have a lesser role in prediction to intentions (Krueger 1993, 1994; Krueger et al. 2000) is that the conceptualisation of subjective norms is limited (Conner and Armitage 1998; Hagger and Chatzisarantis 2005).

This study is of particular conceptual interest to entrepreneurial scholars, but it also provides a policy discussion serving regional and national policy-makers for understanding the role of social norms in economic development. While accepting the fact that it is not easy to change attitudes and norms, there are a number of areas where countries need to address what are perceived as currently accepted norms of economic behaviour, i.e. an entrepreneurial culture should be valued.

The basic proposition of this study is that a wider understanding of social norms is valuable because it helps us to reveal its impact to intentions. This paper is an attempt to develop a concept of social norms pulling from the broadest possible range of research studies and theories.
This paper is organised in six sections. The literature that was examined is described as well as how it was examined. The findings of the analysis will be discussed and finally a conceptual definition that has been constructed is composed. In conclusion, the research implications of the study will be discussed.

In the introduction chapter the problem setting of the paper will be introduced. Following this the purpose of the paper will be established. As a background for the research design of this paper, the perspectives and research approaches commonly adopted in research within social norms will be discussed. The terminology use in this paper will be motivated and central concepts will be defined.

2 The landscape of social norms

Most definitions of social norms focus on social relations in a group. The variety of definitions identified in the literature stem from the highly context specific nature of social norms and the complexity of its conceptualization and operationalisation.

Social norms do not have a clear, undisputed meaning. For this reason there is no set and commonly agreed upon definition of social norms and the particular definition adopted by a study will depend on the discipline and level of investigation. Not surprisingly considering the different theories for looking at social norms there is considerable disagreement and even contradiction in the definitions of social norms. From selected definitions it is possible to confirm that most definitions of social norms share at least one thing in common with each other.

Social norms have a long history and it has been used extensively in social psychology. Since the days of David Hume (1739, 1978) there has been a controversy of the explanatory and predictive value of social norms. One of the major problems is the lack of agreement in definition. While there are differences, there are also agreements on some points. The result is
that it is difficult to arrive to a precise definition and this implication of this lack of precision is discussed. Despite this problem, a working definition is emerging in an interdisciplinary literature and refers to norms, social capital and cooperation between individuals and groups. Social norms do not have a clear, undisputed meaning and thus no set and commonly agreed upon definition of social norms. The particular definition adopted by a study will depend on the discipline and level of analysis. This should not be surprising considering the different theories for looking at social norms and the considerable disagreement and even contradiction in the definitions of social norms (e.g. to Dohrenwend 1959; McKirnan 1980; Axelrod 1986; Cialdini et al. 1990; Hechter and Borland 2001; Bicchieri 2006). Another basic problem is the use of norms and social norms as synonyms. Some researchers, e.g. Bettenhausen-Murnighan (1985) and Feldman (1984) use the word norm and view it as “behaviour patterns that are relatively stable within a particular group” (Bettenhausen-Murnighan 1985, p. 350). The third problem is the flack of definition.

Social norms are the common and accepted behaviours for a specific situation. Norms can be formal or informal. Formal norms are those that have been publicly stated as some sort of law. Informal norms are often unconscious; they are implicitly understood rules of exchange that most members of a group have incorporated. This includes rules that are based on traditions as well as those which have a moral underpinning (North 1990). It is important that social norms are distinguished from moral and legal norms (Elster 1989).

Is it a central concept to a proper understanding of human social behaviour as have been proposed (e.g. Berkowitz 1972; Fishbein-Ajzen 1975; Ajzen-Fishbein 1980; Ajzen 1985)?

All studies must discuss social norms in relation to the particular discipline, study level and context and that a set definition for such is not required, only an identification of operationalisation or conceptualization. Therefore this study will not create a new definition of social norm and will not select an existing definition from the literature as doing so limits
the application and understanding of the concept. This study will identify an appropriate operationalisation and conceptualisation for social norms in following sections. The above discussion of definitions should provide a wide understanding of the social norm concept.

3 Methodology and analysis

This paper presents results of an investigation that analysed 690 articles from 7 peer review journals. This study systematically investigated the different conceptual and operational definitions of social norms found in the articles. These articles have been chosen with the help of Harzing’s publish or perish. Findings suggest that there are three different schools of defining social norms. Most definitions of social norms focus on social relations in a group. The variety of definitions identified in the literature stem from the highly context specific nature of social norms and the complexity of its conceptualization and operationalisation.

In addition to searching titles, abstracts and keywords the search included the full text of articles and their lists of references. This was done to ensure as many definitions as possible in order to give a variety of definitions.

As the focus of this paper is on social norms the review was thus limited to journals focused on social norms as well as entrepreneurship. The examined articles are published in the following highly-cited journals:


The result of the search was 63 articles and the final analysis included 47 articles
4 Orientations associated with social norms

After reading these articles it was possible to see three different orientations:

1. Social identity theory and social categorisation theory

2. Focus theory of normative conduct

and

3. A traditional way of looking at social norms: definitions and concepts found in different articles which are presented as a new concept in this paper

Social identity theory (SIT) was developed by Tajfel and Turner in 1979. The theory was originally developed to understand intergroup discrimination. Taifel et al. (1971) attempted to identify what individuals identify them with, why they do it and when they do it. With the aim to reach a positive social identity, individuals tend to overemphasize the advantages and the superiority of the in-group. Additionally, people try to belong to groups they evaluate as better than others. Evaluations are made in recurrent processes of social comparison between in-group and out-group.

The basic phenomenon observed is that people attempt to establish positive self-esteem by showing solidarity with their in-group and discrimination against out-groups. Tajfel’s (1978) definition of a group is rather broad. He specified that groups do not have to consist of people who personally know each other, but that even remote similarities like being a female member of a specific company might qualify as a relevant group membership.

In SIT a person has not one identity but several selves that correspond to group membership. Different social contexts may trigger an individual to think, feel and act on basis of his personal, family or national level of self (Turner et al. 1979). SIT suggests that people categorize themselves and others in different groups and that they evaluate these groups (Tajfel 1978, Tajfel-Turner 1979).
Turner and Tajfel (1986) showed that the mere act of *individuals categorising themselves as group members* was sufficient to lead them to display in-group favouritism. After being categorised of a group membership, individuals seek to achieve positive self-esteem by positively differentiating their in-group from a *comparison* out-group on some valued dimension. This means that people’s sense of who they are is defined in terms of ‘we rather than I’. An individual has both a self-identity and a social identity which belong to the group.

According to the **focus theory of normative conduct** (Cialdini et al. 1991), there are two types of norms: descriptive and injunctive. Whereas descriptive norms refer to perceptions of what is commonly done in a given situation and they characterise the perceptions about behaviours of group members. Injunctive norms refer to perceptions of what is commonly approved or disapproved within the culture (Reno et al. 1993). Focus theory predicts that if only one of the two types of norms is prominent in an individual’s consciousness, it will exert the stronger influence on behaviour (Cialdini and Goldstein 2004). Normative beliefs refer to the perception and not the reality. Normative beliefs are social in nature, referring to what other people think and do (Kallgren et al 2000).

### 5 A new concept of social norms

**The structure of social norms**

The content of a norm

The content of a norm is defined as normative and empirical expectations. Of interest is the fact that norms are different for members and non-members of a given group. An individual knows that a group of people follow a rule in a certain situation as well as believes that a group of people expects the individual to follow the rule in the situation (Bicchieri 2006). A group creates shared rules and values of both proper and improper ways of behaviour to its members (Sherif-Sherif 1969).
The normative structure and evaluate reactions

What is appropriate behaviour; what behaviour is disapproved? A norm is related to the evaluation of behaviour: positive evaluations for normative behaviour and negative for non-normative behaviour. Many of the studies emphasize the fact that unwanted behaviour meets disapproval. However, Sherif and Sherif (1969) describe norms as latitudes; an individual can behave without being controlled. An individual has knowledge of a rule that applies in certain situations and believes that a group of people expects the individual to follow the rule in a situation, knowing that sanctions may occur (Bicchieri 2006).

Some but not all norms are functional in the sense that they provide legitimate expectations of another's behaviour and they have also the ability to motivate people. People are thereby able to predict the actions of others and to feel confident of others' responses to their own actions. This predictability and confidence serve to facilitate exchange (Horne 2001). Norms and trust are related; norms guide people’s behaviour and there for they are trustworthiness that increases trust in other people. Another important norm is reciprocity (Knack and Keefer 1997).

The focus of a norm

Social context of norms

All norms have a specific social context and they govern much of our social and political life; an established norm can be very powerful. How do we learn to behave in an expected way in a given environment? We learn to behave in ways we believe others approve of. Social norms are rules shared by a group for contextually bounded behaviour i.e. they depend on the situation and the roles of the participants, but norms are attributes of a social system rather than of individuals (Bettenhausen-Murnighan 1985). The normative social influence is based on the need to be accepted by others (Cialdini et al. 1990; Kallgren et al. 2000; Hechter and
A norm is a property of a social system and expresses important values of a group (Feldman 1984; Sutton-Rafaeli 1988). Social norms are functional in regulating social life and they especially evolve when individual actions cause negative side-effects for others (Coleman 1990). Social norms, therefore, help establish "a stable but not necessarily efficient structure to human interaction" (North 1990, 6).

Heide and John (1992) look at norms as expectations about behaviour. They indicate the established and approved ways of doing things; these vary through time, age group, social classes and social groups. Norms apply at different levels: societies, particular industry, individual firms or groups of individuals (Heide and John 1992). Social norms can also be looked as unwritten rules or a social contract. Norms are often transmitted by non-verbal behaviour, for example with looks. They may also be transmitted through stories, rituals and role-model behaviour (Kaasa 2007).

The level of analysis of a norm

Norms are learned within and shared among a social group. For example taboos and cultural values can be analysed by looking at the entire culture and norms governing drug use must be studied among a special social group. The use of alcohol could be studied across different groups or in a group (McKirnan 1980). If social norms are learned, they can change over time which would mean change in behavioural patterns (Labovitz-Hegedorn 1973).

Definitions of norms are often based upon expectations, values and behaviour (Axelrod 1986). Values are relevant but they are individual or commonly shared. Norms are generally accepted and they have both a subject (those who set the prescription) and an object (those to whom it applies (Morris 1956). According to Axelrod (1986) "a norm exists in a given social setting to the extent that individuals usually act in a certain way and are often punished when seen not to be acting in this way” (p. 1097), i.e. norms uniform behaviour in a social group.
(Young 2008). Fishbein and Ajzen (1975) use the term subjective norms to describe this phenomenon. This can be compared to what Bandura (1989) refers to as role models and social persuasion.

Hechter and Borland (2001) use the same argumentation as Axelrod. According to them social norm are the rules that a group uses for appropriate and inappropriate values, beliefs, attitudes and behaviours. Social norms are rules shared by a group for contextually bounded behaviour i.e. they depend on the situation and the roles of the participants. Norms govern and unify behaviour and interaction in the group. These rules may be explicit or implicit. Failure to follow the rules can result in punishments, which can lead to exclusion from the group.

According to Dohrenwend (1959) and Gibbs (1965) a norm has three definitional attributes: collective evaluation, collective expectation and reactions to behaviour. Collective evaluation is perhaps the most commonly used characteristic, e.g. how a person ought or ought not to behave. Collective expectations refer to predictions of what persons will do. People believe that regulations, for example traffic regulations, should be obeyed although they know that these rules are sometimes violated.

An injunctive social norm describes the perceptions of what most people approve. Another social norm, the descriptive social norms refer to one’s perception of what others actually do. Although these two different kinds of norms are often related, they are conceptually and motivationally separate. Injunctive social norms stimulate a person to act by making a social evaluation. Whereas descriptive social norms make a person act using social information about a proper conduct in a given situation, for example, “If the majority of people do this, it’s the right thing to do” (Cialdini et al. 1990; Cialdini et al. 1991; Reno et al. 1993; Kallgren et al. 2000).

There is confusion between social norms and attitudes. This confusion stems from the fact that both attitudes and social norms are being learned and there exists a network of
expectations to respond in a consistent manner. As attitudes apply to everything; social norms apply specifically to behaviours (Ajzen and Fishbein 1980). Another major difference is that attitudes, although influenced by the group, are individually held. Social norms, however, are beliefs about generally approved behaviour, which most individuals share with the group even if they do not agree with them personally (Katz-Kahn 1978; Feldman 1984; Bettenhausen-Murnighan 1985). Fishbein and Ajzen (1975) incorporated the concept of social norms in behaviour models to optimise the prediction and explanation of human action.

The social component of Ajzen and Fishbein’s model, the subjective norm, is a person’s perception of whether most people think that he or she should perform the behaviour in question. Subjective norms look at the influence of people in one’s social environment on his/her behavioural intentions. The beliefs of people, weighted by the importance one attributes to each of their opinions, will influence one’s behavioural intention. Although the theory of planned behaviour suggests that normative influences may affect behaviour, that normative influences are those of significant others such as friends, family and co-workers and not a widespread norm (Fishbein-Ajzen 1975, Ajzen 1985). Could the social norm be a better predictor?

6 Conclusions and implications for the development of conceptualising social norms

One of the most significant findings from the article analysis has been the relative lack of the definitions. Any development would require more rigorous and structured research in the topic and conceptual development is critical to the establishment and development of studying entrepreneurial intentions.

It can be recognised that developments in understanding social norms require multidisciplinarily in order to address the contrasting antecedents.
This paper had a goal to provide a taxonomy of social norms as an aid to the classification of research in the field and as a means of providing a framework for the identification of the key contents of the concept. Of significance is the need for researchers to be aware of the complementary studies of the “normal” domains. Future research may require a more cosmopolitan approach, incorporating a combination of social psychology and entrepreneurship disciplines.

This research makes the following contributions:

First, this paper provides a wider understanding of social norms and how and when these affect entrepreneurial intentions. By providing a concise working definition of social norms, this paper analyses why it is important for developing entrepreneurial intentions to start a firm as well as to policy-makers and regional development to understand how societal norms can inhibit entrepreneurial activity. The intention models are widely used and tested (e.g. Ajzen 1985, 1991; Ajzen-Madden 1986, Krueger 1993, 1994, Krueger et al. 2000) but they still leave some unanswered questions about behaviour and the factors that influence it. Ajzen and Fishbein modified their model as recently as 2005. Their latest model presents background factors and normative and behavioural beliefs.

Second, the paper analyses why norms are important to entrepreneurial intentions. This paper also offers a discussion of how entrepreneurial intention models could be developed to better understand the role of social norms.

Third, studies typically discuss social norms in relation to the particular discipline, study level and context and that a set definition for such is not required, only an identification of operationalisation or conceptualization. Therefore this study does not create a new definition of social norm and does not select an existing definition from the literature as doing so limits the application and understanding of the concept specific to its use. This study identifies an appropriate operationalisation and conceptualization of social norms. This discussion of
definitions should provide a wide understanding of the social norm concept to the development of entrepreneurial behaviour.

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Using customer relationship management as a vehicle to enhance the sustainability of small and medium tourism enterprises in the Eastern Cape, South Africa: Towards a conceptual framework

by Dinesh Vallabh and Laetitia Radder

Abstract
This paper reports on the initial stages towards the development of a conceptual framework that can determine the use of CRM as a vehicle to enhance the sustainability of small and medium tourism enterprises in the Eastern Cape South Africa.

Tourism is widely acknowledged as one of the economic drivers for South Africa. One of the challenges identified is the importance of supporting emerging tourism entrepreneurs and of maximizing opportunities for the SMME sector. The province of the Eastern Cape (EC) is characterized by high levels of unemployment, poverty and crime. The role of SMTEs is imperative in attempting to alleviate poverty and create jobs. The role of CRM in the success of SMTEs has been proven worldwide. The research highlights using CRM as a vehicle to enhance sustainability of SMTEs in the EC. A conceptual framework is proposed. The study will follow both a quantitative and a qualitative approach. The study is expected to add to the body of knowledge that attempts to make SMTEs sustainable in the South African context. This is part of a phased study.

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JSBM Research Area: Small Business Technology and Innovation
Introduction

The South African tourism industry is one of the country’s leading economic growth sectors, not only because of its contribution to the gross domestic product, but also because of its creation of sustainable jobs, particularly in the small, medium and micro-enterprise sector (Focus on Buffalo City, 2005). Research conducted by the World Travel and Tourism Council highlighted that by 2010 more than 174,000 direct new jobs will be directly created and a total of 516,000 employment opportunities will be generated as a result of tourism activities. The majority of these new jobs are expected to be found within the SMME industry (Thomas, 2003).

Tourism is widely acknowledged as a strategic priority and potentially one of the economic drivers for South Africa in the 21st century. Since 1994, new policy frameworks have been put in place to guide the development of the country’s SMME economy and change the direction of the tourism industry. The White Paper on the Development and Promotion of Tourism is the core of South Africa’s new tourism policy. It identifies tourism as a priority for national economic development (Thomas, 2003). Creating an enabling environment in terms of national, regional and local policy frameworks for SMME development is an important priority. Furthermore, through the White paper, important initiatives were brought about in addressing historical industry imbalances resulting from a discriminatory political system. Important initiatives included tourism entrepreneurship, human resources development, equity and ownership among disadvantaged individuals and communities (South Africa, 1999).

Several key constraints are seen to limit the effectiveness of the tourism industry in playing a more meaningful role in the national economy. The major constraints include: inadequate resource-funding by government; lack of involvement of the private sector; limited integration of local communities and previously neglected groups into tourism; inadequate or absence of tourism training, education and awareness; inadequate protection of the environment through environmental management; poor level of service standards within the industry; lack of infrastructure in rural areas; lack of appropriate
institutional structures; and the problem of violence, crime and the security of tourists (South Africa 1996). The White Paper aims to chart a path towards changing the tourism industry in South Africa and offers proposals to unblock constraints within the context of objectives for reconstruction.

At the heart of national government’s SMME support programmes are the policy interventions introduced by new institutions and structures which were set up to implement the national SMME strategy. The key players were the Ntsika Enterprise Promotion Agency, which was responsible for non-financial or business development services, and Khula Enterprise Finance, which functions as a wholesale finance institution supporting a range of retail finance intermediaries which would deal directly with the SMME entrepreneurs themselves. Support focused on improved and decentralised access to information, training, markets, finance and technology, improvements in business infrastructure, the market environment, and the strengthening of networks between enterprises (Thomas, 2003). The institutional support network that was created through the White Paper was to nurture the sustainability of South Africa’s SMME economy. One of the key challenges identified by the Department of Tourism and Environmental Affairs (DEAT, 2000) is the importance of stimulating and supporting emerging tourism entrepreneurs and of maximizing opportunities for the SMME sector.

The Eastern Cape Province (EC), economically the poorest province in South Africa, is characterized by high levels of unemployment, poverty and crime. These factors impact negatively on the economy and become problematic to the sustainability of SMTEs. Poor service level standards were identified as one of the barriers that need to be addressed to facilitate tourism-related product development in the EC. Nelson Mandela Bay Tourism research indicates that service levels in restaurants were below par. Furthermore, in 2008, a skills shortage among tourism organisations, municipalities, communities and management implementation levels was reported (Porter, 2008).

Tourism in the EC has the potential to generate billions of revenue. Further development is a critical priority for future prosperity, while an aggressive strategy for
improving all aspects in the industry is important for attaining economic growth. The high levels of unemployment and poverty are central issues currently addressed by government. The EC as a whole suffers from high rates of unemployment and widespread poverty. With 71 percent of the population earning less than the household subsistence level, poverty alleviation and job creation are a high priority (Focus on Buffalo City, 2006).

The role of entrepreneurship and SMTEs cannot be over-emphasized in attempting to alleviate poverty and create jobs. Entrepreneurship and the development of small and medium enterprises (SMEs) has become a dominant theme of development economics in the developing and developed world (Tassiopoulos, 2008). Furthermore, SMEs are well recognized and acknowledged as significant contributors to economic development, employment, health and welfare of the economy. Ntsika (in Tassiopoulos, 2008) indicates that SMEs are being targeted as a means of stimulating economic growth, creating employment and raising the standards of living for many South Africans in rural and urban areas. Furthermore, SME development is seen as a low-cost means of addressing geographic inequalities and promoting entrepreneurial activity to build the economic strength of the country.

The benefits of a burgeoning small business sector are especially relevant to the current economic situation in South Africa. Given South Africa’s legacy of big business domination, constrained competition and unequal distribution of income and wealth, the small business sector is seen as an important force to generate employment and more equitable income distribution, to activate competition, exploit niche markets, and enhance productivity and technical change. In addition, the SMME sector provides a highly effective vehicle for black economic empowerment (Chabane, 2003)

The South African tourism industry is numerically dominated by Small and Medium Tourism Enterprises (SMTEs) which underpins the delivery of the tourism product. This is typical in most countries and is particularly important in destination development. However, SMTEs have to increasingly cope with political, economic,
environmental, social, technological and innovation challenges as well as those related to
distribution handicaps, and seasonality of supply and demand (Buhalis, 1994; Europe
Direct, 2003 in Tassiopoulos, 2008). In addition, Tassiopoulos (2008) suggests that
SMTEs fail due to lack of proper business support structures, communication, aftercare,
access to information, provision of infrastructure and service support, managerial
competence and experience.

In 2008, South Africa’s Department of Environmental Affairs and Tourism
(DEAT), highlighted service excellence as a strategy for increasing tourism to the
country. Furthermore, it was emphasized that customer service is one of the critical skills
lacking as there has been a lack of underlying service ethos which prevails across the
board in the country. These statements stem from a competitiveness rating in which
South Africa was rated number 62 out of the 124 countries assessed. Van Schalkwyk,
Minister of Environmental Affairs & Tourism (2008) reported that an audit into the skills
levels indicated that service excellence was one of the crucial ingredients in sustainable
tourism growth. The audit also highlighted the need to urgently develop a customer
service programme and transform South Africa into a globally competitive service
economy and destination of choice.

Given tourism’s role in economic growth and in addressing economic
development, poverty and unemployment in the EC, it becomes imperative to investigate
avenues for enhancing its sustainability, particularly of SMTEs in the EC. Tourism is a
growth sector in the EC economy and with its employment intensity, significant
unrealized potential and linkages to the rural economy has been identified as a priority
sector for the province. THETA (2009a) indicates that formal SMTEs in the EC
including franchisees amounts to 6.62% of all SMTEs in South Africa. Furthermore,
according to THETA (2009a), the largest number (74%) of SMTEs, employing less than
50 employees, operate within the Hospitality sub-sector. The Hospitality sub-sector,
similarly, has the largest number of SMMTEs that employ 150 and more employees.
The role of CRM in the success of SMTEs has been proven worldwide. For example, Massey, Montoya-Weiss and Holcom (2001) observe that CRM encourage companies to serve customers more effectively by bolstering business systems and thereby become truly customer-centric. Furthermore, Ozgener and Iraz (2005) in their study of SMTEs in Turkey found that business dynamics play a critical role in customer relations. They identified CRM as a key driver of SMTEs. As far as could be determined, the role of CRM in the success of SMTEs in South Africa has not been investigated in any depth.

The question, therefore, arises as to how SMTEs in the EC, a province in dire need of growth, can become sustainable? Given the proven importance of CRM, it needs to be determined if, and how, CRM can enhance the continued existence and growth of these enterprises.

The main problem can thus be stated as follows:

Can CRM be used as a vehicle to enhance sustainability of SMTEs in the EC and if so, how?

In addressing the problem statement it, however, has to be borne in mind that successful implementation of CRM, requires of organizations to first determine whether CRM fits into their overall business strategy, their current CRM capabilities, and whether they have a business reason for implementing CRM. Despite the prominence given to CRM, not all organizations are necessarily ready to implement such a strategy (Tie, 2003). Entrepreneurs must examine how critical CRM is to the survival of their business. They should consider whether increased competition, the growing cost of customer acquisition and high customer turnover are indeed major issues which they can address by means of CRM.
The meaning of CRM

CRM is a holistic approach to managing customer relationships to create shareholder value. It uses marketing strategies and IT to create profitable, long term relationships with customers and other key stakeholders (Payne & Frow, 2005). CRM is an active, participatory and interactive relationship between the business and customer. Ozgener and Iraz (2006) observe that the focus should be on customer needs rather than product features. This means moving from a product orientation to customer orientation.

The role of CRM

CRM is currently a popular topic in the fields of business strategy, marketing management and information technology. SMEs are embracing CRM as a vital aspect of business strategy because technological applications permit a precise segmentation, profiling and targeting of customers and because competitive pressures require a customer-centric culture (Ozgener & Iraz, 2006). Lindgreen (2004) asserts that if CRM is applied correctly, it can contribute exceptional economic value to the company as well as add to its competitive advantage. Implementing CRM systems can enhance an organisation’s ability to improve customer service, which can in turn generate revenue, which enhances sustainability.

However, not all organisations that implement CRM have been successful. Re-engineering a customer-centric business model requires cultural change and the participation of all employees within the organisation. Successful implementation of CRM means that some jobs will significantly change. Management must show its commitment to an ongoing company-wide education and training program. In addition to enhancing employee skills and knowledge, education boosts motivation and commitment of employees and reduces employee resistance (Morphito, 2008).

Challenges and barriers to CRM success

Payne (2006) stresses that many CRM failures can be avoided by paying more attention to the organisational issues involved in assessing the readiness for CRM; addressing the project management and change management requirements; understanding
the role of employees and planning; and carefully executing and evaluating the CRM programme. Successful CRM implementation is preceded by the development of a clear, relevant and well-communicated CRM strategy.

Light (2003) and Payne (2006) raise the question of organisational maturity and organisational information technology selection, implementation and usage capabilities. The stage of CRM development or readiness, is therefore also critical. Payne (2006) maintains that when reviewing CRM readiness it is useful to consider the barriers typically faced by other organizations in developing their CRM programs. A number of common barriers to CRM success have been identified: lack of skills; inadequate investment; poor data quality and quantity; failure to understand the business benefits; functional boundaries; lack of leadership.

These barriers can help explain why CRM has become a critical business issue. However, the problem faced by many companies, both in deciding whether to adopt CRM and in proceeding to implement it, stems from the fact that there is a great deal of confusion about exactly what CRM is. Payne (2006) suggests that this confusion may be explained by three factors as listed below.

- The lack of a widely accepted and clear definition of its role and operation within the company.
- An emphasis on information technology aspects rather than its benefits in terms of building relationships with customers.
- The wide variety of tools and services offered by information technology vendors, which are often sold as CRM.

CRM entails getting closer to customers and gaining an in-depth understanding of their situations, motivations and behaviours. While sophisticated technological tools and techniques have made this task easier, the secret of success lies in their specification, integration and careful implementation.
**CRM strategy**

Just as building a house first requires an architectural plan, successfully implementing CRM must be preceded by a sound CRM strategy. Kumar and Reinartz (2006) highlight that a CRM strategy requires the following four components.

- A customer-management orientation: customer-management orientation recognizes that customers are heterogeneous in needs and value to the company. Furthermore, customer orientation reflects a readiness to treat different customers differently.

- Integration and alignment of organizational processes: all departments and functions must be involved in a strategic initiative.

- Information capture and alignment of technology: information capture and alignment of technology can be used to make customer management processes more effective.

- CRM strategy implementation: the implementation of CRM pertains to the processes and activities required for a successful CRM strategy.

Kumar and Reinartz (2006) highlight that each component plays an essential role. Each component should interact and reinforce each other for CRM to succeed as shown in Figure 1.
Research Aim and Objectives

As the literature on SMTEs and CRM did not provide an answer to the research question, therefore, further research is deemed necessary. It is important to provide SMTE organizations in the Eastern Cape with a simplified diagnostic and development model that can assist them in their decisions on CRM. To this effect, the following steps would be required.

- Examine the role of SMTEs in the tourism industry of the EC.
- Establish a profile of SMTEs in the EC (e.g. number of employees, annual turnover and total gross asset size)
- Identifying the elements and requirements of CRM strategy (study

Source: Kumar & Reinartz (2006)
assumes that some form of CRM will result in a sustainable SMTE, however, the measurement of sustainability is not considered to be within the parameters of the study

- Identify environmental constraints (micro, market and macro) that impact SMTEs, particularly in the Eastern Cape
- Identify potential CRM strategies given the environmental constraints and opportunities and the stage of SMTE development
- Determine the current levels of implementation in SMTEs in the EC
- Integrate the knowledge resulting from the preceding objectives to serve as a foundation of the development of the proposed model

**Conceptual framework to service as basis for the model development**

Stefanou and Sarmaniotis (2003) alleges that CRM as an emerging discipline is in great need of theoretical assistance. According to them, internationally, guiding theories and models are lacking. A few seemingly useful models that could be serve as input into the development of the required model found are those by Stefanou and Sarmaniotis (2003); Chen and Popovich (2003); Nguyen (2007); Winer (2001); Park and Kim (2003); Payne and Frow (2005) and Tie (2003).

The framework shown in Figure 2 is modeled on that developed by Stefanou and Sarmaniotis, (2003) and Saayman and Snyman (in Tassiopoulos, 2008). The work by Stefanou and Sarmaniotis (2003) focused on exploratory research based on a mail survey addressed to the largest 1,000 organizations in Greece. They proposed a conceptual model of CRM development stages of CRM. On the other hand Saayman and Snyman,(in Tassiopoulos, 2008) identified various strategies that an entrepreneur can implement in order to grow or sustain growth of a business. They analyse key stages of growth with both barriers and challenges to growth.

Chen and Popovich (2003) proposed an integrated approach to managing relationships by focusing on customer retention and relationship development. They claim that CRM as a technology-only solution is likely to fail. Furthermore, managing a
successful CRM implementation requires an integrated and balanced approach to technology, process and people. In addition, Chen and Popovich’s model focuses on the implementation of CRM.

Nguyen (2007) suggested that CRM is an information system that tracks customers interactions with the firm. He puts forward strategies for successful implementation of CRM and discusses barriers to CRM in e-business. The model depicted focuses on customer segments and channel maps.

Winer (2001) indicated that there is a strong, positive relationship between customer satisfaction and profits. He expresses that managers must constantly measure satisfaction levels and develops programmes that help to deliver performance. He presents a comprehensive set of relationship programmes which includes customer service, loyalty programmes, customization, reward programmes and community building.

Park and Kim (2003) put forward a customer information system (CIS) which manages and distributes customer information. They identify a gap between marketing and information technology as a barrier in implementing a successful CIS. A framework of dynamic customer relationship management is developed which is supported by an information technology strategy.

Payne and Frow (2005) developed a conceptual framework for CRM that helps broaden the understanding of CRM and its role in enhancing customer value and shareholder value. They identify five key cross-functional, process orientated approaches that positions CRM at a strategic level. These approaches include: a strategy development process, a value creation process, a multichannel integration process, an information management process and a performance assessment process. The conceptual framework is based on these processes and explore the role and function of each element in the framework. Given the nature of their framework, it is expected that this structure could be useful in informing the current research
Tie (2003) observed that unlike large companies, SMEs do not possess sufficient technology know-how, resources and information technology personnel to implement a CRM programme. As a result, most SMEs cannot afford such expensive CRM products that are offered by traditional CRM vendors. Tie mentions that a typical in-house CRM system development approach widely employed by large firms is unlikely to be applicable to SMEs. Tie recommended using application service providers (ASP) which is an effective approach that SMEs can employ in order to benefit from CRM.

Based on the preceding discussions on the characteristics of SMTEs, the elements of CRM and CRM models, a proposed conceptual framework is shown in Figure 2. Since no model addressing the research question of the current research could be found, a conceptual framework expected to serve as a foundation for the development of a model addressing the needs and objectives of the study is proposed as shown in Figure 2 is put forward.
A conceptual framework of CRM for SMTEs

**MICRO & MARKET FACTORS**

- Business Strategy
- Customer Strategy
- Size of Company
- Information Technology
- Organisational Readiness
- Employee Motivation
- Change Management
- Customer Demographics
- Segmentation
- Customer Value
- Multi-channel Integration
- Performance Assessment

**GROWTH PHASES OF SMTEs**

- Survival
- Profitability
- Growth
- Maturity
- Rejuvenation

**MACRO ENVIRONMENT**

- Technological
- Economic
- Social
- Physical
- Government
- Intern

Source: adapted from Saayman in (Tassiopoulos (2008); Stefanou & Sarmaniotis (2003))
A number of market and micro variables form part of the conceptual framework shown in Figure 2. Careful analysis of each of these variables are required as these variables will have a profound impact on the customer experience (Chen & Popovich, 2003; Park & Kim, 2003; Payne, 2006; Tie, 2003).

The macro-environment includes more general forces that do not influence the activities of the SMTE directly, but that may have an impact on its decisions. Tassiopoulos (2008) identifies six distinct sub-environments within the macro-environment with an influence on the operations of SMTES. These are technological, economic, social, physical, governmental and international variables.

Apart from the environmental factors, the stage of development of the organization also has to be taken into account when deciding on CRM as each stage poses unique challenges associated with sustainability. For example:

- The first CRM development stage is characterized by an absence of advanced information technology. Survival of the organizations is of paramount importance.
- In the second stage, profitability of the organization becomes more important.
- The third stage is focused on growth of the SMTE. Generally, IT-automated CRM becomes more important.
- The fourth stage is the maturity phase. The organization might need to modify its operations to maintain profitability. Integrated CRM could be associated with customer personalization and high levels of service and customer satisfaction.
- The fifth stage can be characterized by rejuvenation.

As it is expected that the challenges, opportunities and implementation of CRM will differ according to the phase of development, organizations will have to be classified into the different stages. This would allow for the focus of the model to be aligned with the characteristics of the particular phase.
Research design and methodology associated with the model development

In order to develop a useful CRM model, qualitative as well as quantitative approaches will be required. The process should commence with detailed analysis of existing models and theories to provide a basis for a conceptual framework of an anticipated CRM model applicable to SMTEs in South Africa, taking cognizance of the unique challenges in the environment. This process should be integrated with focus groups conducted with managers of SMTEs from each stage as indicated in Figure 2. These processes should allow for the formulation of hypotheses underlying the fundamental elements of the model. Quantitative data collected from a sample of SMTEs should then be used to test the hypotheses to arrive at a final CRM model.

Conclusions and managerial implications

This paper reports on the initial stages towards the development of a conceptual framework that can determine the use of CRM as a vehicle to enhance the sustainability of small and medium tourism enterprises in the Eastern Cape South Africa.

As a business strategy, CRM establishes the need to make customer satisfaction the company’s ultimate objective. The overall goal of CRM in SMTEs is to help organizations deliver a higher level of customer satisfaction than their competitors which would ultimately result in their sustainability. In order to achieve this, organizations first have to:

- determine whether CRM is required and viable given their particular situation;
- decide in which stage of development they find themselves and determine which challenges this stage pose to the implementation of CRM;
- analyze environmental factors that influence their decision-making; and determine the role of CRM
- determine the optimal implementation of CRM.

The study is expected to add to the body of knowledge that attempts to make SMTEs sustainable in the South African context. If the challenging issue of CRM implementation
can be successfully addressed, the failure rate among SMTEs could be dramatically reduced, contributing to the social and economic wellbeing of the South African community.
REFERENCES


Innovation as a pre-condition for export activities of SMEs?  
- Evidence from the European Union -  

Christian Hauser*  
Kerstin Wagner**

ABSTRACT. The growing internationalisation of business and globalisation of trade are changing the competitive industrial environment for European small and medium-sized enterprises (SMEs). Technological innovation such as the introduction of new products and the improvement of a firm’s existing product range is considered to play a key role for a firm in the maintenance or improvement of its market position, particularly in competitive and saturated industries. In recent years, the relationship between innovation and export performance has therefore received growing attention in economic literature. However, the existing empirical results for single countries tend to be inconclusive stating a clear link between the two variables. In our study, we examine the relationship between product innovation and export intensity using data covering 2,813 enterprises from the manufacturing sector from the 27 Member States of the European Union. The results of our regression analysis show that the level of innovation activity seems to have a significant impact on the export intensity of a firm.

KEY WORDS. Innovation, Internationalisation, Export intensity, Small and medium-sized enterprises (SMEs), Manufacturing sector, European Union

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Women Entrepreneurship in Mongolia: The Role of Culture

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“We could start our business because the society encourages women to go outside and have jobs like men.”
-Erika, MBA, co-founder of Golden Gobi

Abstract
Building on psychological theories of creativity and entrepreneurship, this study examines the role of culture on women entrepreneurship in Mongolia. Based on several exploratory field trips to Mongolia, two woman-founded, woman-owned, entrepreneurial firms were identified and researched. The findings of the research show that beside factors predicted in the theoretical model (entrepreneur’s knowledge, motivation, personality and environment), an entrepreneur’s culture plays a major role in the creation and success of new entrepreneurial firms as well. Specifically, the Mongolian nomadic culture of adventurism, secular culture of empowerment of women and Asian culture of collectivism play significant roles in the creation of new firms and the success of female entrepreneurs in Mongolia.

Introduction
According to the UN country statistics, Mongolia is considered a landlocked developing country¹. Its GDP per capita is $3,400, ranked 160 in the world. Mongolia is in central Asia with an area of 1.56 million square km (one-sixth the size of the United States) and a population of only 3 million. For centuries, breeding livestock and agriculture has been the Mongolian traditional way of life. The current Mongolian economy, however, depends only 18.8% on agriculture and husbandry. The rest of the economy depends, 38.5% on industry and 42.7% on service².

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² Source: CIA World Fact Book.
Although it is a developing country, Mongolia enjoys a 98% literacy rate: one of the highest literacy rates in the world, especially, literacy among women. Besides a broadly-educated population, Mongolia is a vast country with abundant mineral resources of copper, coal, gold, molybdenum, fluorspar, uranium, tin and tungsten. Mongolia also has a diverse nature (covered by steppes, desert, snow-capped mountains and glaciers, fresh-water lakes) and diverse wildlife (such as wild horses, argali, ibex, deer, and gazelles). These combined with the Mongols’ unique nomadic way of life creates a potential for tourism development. Therefore, despite all the shortages (such as poor infrastructure), the country has a great potential for development and progress.

In our field trips to Mongolia and direct observation of Mongolian businesses and Mongolian way of life, we noticed that in both rural and urban areas, women are actively involved in all aspects of their society’s life. For instance, in rural areas women are not only actively involved in the day-to-day family business affairs, they also play a key role in making family business decisions such as buying equipment, selling or buying livestock or migrating to a different location. On the other hand, in urban areas such as the capital Ulaanbaatar, many women are particularly active entrepreneurs involved in all sorts of entrepreneurial activities including tourism, production, manufacturing and trade.

These observations motivated us to raise and research the question ‘what role does Mongolian culture play in women entrepreneurship in Mongolia?’ To answer this question, we chose two woman-founded and woman owned companies: Tseren Tours, one of the biggest tour companies in Ulaanbaatar and Golden Gobi, a well-known guest house and tour company in Ulaanbaatar,
founded and run by three sisters. First, in our trips to Mongolia in summer 2008 and 2009, we visited and discussed with co-founders of these firms. Then, back in our university we developed a theoretical model and we interviewed the co-founders of these companies again. The result of this study is reported in this paper in the following order: theoretical background, empirical research and findings, discussion, conclusion and need for further research. This paper contributes to three strands of literature: entrepreneurship in developing countries, women entrepreneurship and entrepreneurship and culture. Thus, we adopted a multidisciplinary and qualitative method of inquiry in this study.

**Theoretical Background**

**Entrepreneurship and economic development**

There is little disagreement in the literature that entrepreneurship contributes to the development and growth of national economies (e.g. see, Anokhin et al., 2008; Holcombe, 1998; Naude, 2009). For instance, Acs et al. (2008) argue that ‘entrepreneurship is considered to be an important mechanism for economic development through employment, innovation and welfare effects” (p. 219). Similarly, scholars have consensus that entrepreneurship plays a vital role in the economic development of developing countries. Bertaux and Crable (2007) for instance argue that ‘entrepreneurship is the foundation of a new model of development for developing countries’ (p. 467).

**Women entrepreneurship**

In developing countries, as Self and Grabowski (2009) argue, gender inequality and the lack of gender development are major problems. In developed countries, studies show that women entrepreneurship can provide jobs for more women and contribute to economic stability and
economic development. For example, the findings of an empirical research on 400 female owner-managers of businesses in Quebec City, Canada, show the significant role of women entrepreneurs in the stability of small businesses and sustainability of the local economy (Lee-Gosselin and Grisé, 1990). Another study done by Wells et al. (2003) on 561 women entrepreneurs in Russia shows the significance of women-owned businesses to the Russian economy. According to this study, more than two-thirds of these firms had 10 or more employees, mostly women, providing employment and social services no longer provided by the state to fellow-women (Wells et al. 2003: 70). Therefore, entrepreneurship, not only in developing countries but also in developed countries, can become an important mechanism to overcome gender inequality.

**Male and female entrepreneurs**

Studies show some dissimilarity in the motivations for business entry of male and female entrepreneurs. For instance, research conducted by Buttner and Moore (1997) on 129 executive women who left large organizations to become entrepreneurs shows most women in this study were motivated by the desire of avoiding gender discrimination in the workplace as a major obstruction to their self-determination and career advancement. Males becoming entrepreneurs share some of these motives, like desire for challenge and self-determination or desire for career achievement; however, since they face less gender discrimination in workplaces, avoiding discrimination is not a major motive for them to start a new business. Meanwhile, most studies show more similarities between male and female entrepreneurs in psychological characteristics and common operational problems perceived by business owners, like marketing, accounting and management problems (Stevenson, 1986).
Entrepreneurial firm

An entrepreneur is an individual who establishes and manages a business for the principal purposes of profit and growth (Carland et al., 1984: 358). Business here is referred to as an entrepreneurial firm. According to Covin and Slevin (1991: 19), “firms with entrepreneurial postures are risk taking, innovative, and proactive. An entrepreneurial firm’s economic performance is generally acknowledged to have two primary dimensions - growth and profitability. The financial criteria implied by these dimensions would include, for example, sales growth rate, return on assets, and the profit-to-sales ratio and the prospect of favorable ratings on such criteria must be regarded as a key reason why firms engage in entrepreneurial behavior.” Therefore, an entrepreneur’s success depends on two major factors: 1) creation of an entrepreneurial firm and 2) a firm’s growth and profitability.

Entrepreneurship and creativity

According to Schumpeter (1934), an entrepreneurial venture leads to the introduction of a new product; or the introduction of a new method of production of an existing product; or the creation of a new market for an existing product. Establishing a new venture that leads to one of these outcomes requires entrepreneurial creativity. An influential creativity theory that is applicable to entrepreneurial creativity is confluence theory. Confluence theory incorporates cognitive and environmental factors that influence individual creativity. This theory has gained increasing acceptance in recent years in entrepreneurship discipline (Baron and Shane, 2008). According to this theory, creativity requires a confluence of six distinct but interrelated resources (Sternberg, 2006; Sternberg and Lubart, 1991, 1995): intellectual abilities (the ability to think about new ideas and identify suitable ideas); knowledge (expert knowledge about new idea); styles of thinking (preference and decision to think in new ways); personality (personality attributes for
creativity such as willingness to overcome obstacles, willingness to take sensible risks, willingness to tolerate ambiguity and self-efficacy); \textit{motivation} (intrinsic, task-focused motivation essential to creativity such as focus on work rather than the potential rewards); and \textit{environment} (that is supportive and rewarding of creative ideas).

\textbf{Psychological theory of entrepreneurship}

Although creativity is important to the creation of a new venture, there are other individual factors that play a role in the creation and success of a new venture firm as well. Theories in entrepreneurship that pay particular attention to the attributes of individual entrepreneurs for the creation and success of new ventures are psychological theories. These theories assume that fundamental attributes of people determine who becomes an entrepreneur (Shane, 2000). According to these theories, major personal attributes that distinguish entrepreneurs from others include need for achievement, self-efficacy, locus of control, willingness to bear risk and tolerance for ambiguity (Begley and Boyd, 1987; Brockhaus, 1982; Brockhaus and Horwitz, 1986; Chen et al., 1998; McClelland, 1961; Shane, 2000).

Self-efficacy is an individual’s belief about his or her capability to begin and to perform a task successfully. For instance, an entrepreneur’s inner belief in him or herself that he or she can start a new venture company and can make it a successful business. Studies show that self-efficacy is positively related to the intention to set up a new business. For example, a study conducted by Chen et al. (1998) on students in management and organizational psychology shows that students who studied entrepreneurship and were business founders had higher self-efficacy in innovation and risk-taking than those who did not study entrepreneurship and were not business founders.
In a related vein of argument, Brockhaus and Horwitz (1986) argue that entrepreneurs who have a high belief in their abilities to influence the achievement of business goals (the outcomes), their perceived possibility of failure are relatively low. Consequently, their perceived level of risk is lower than that of non-entrepreneurial personalities as well. In other words, an entrepreneurs’ willingness to take risks is higher than those of non-entrepreneurs. A survey conducted by Jennings et al. (1994) on 19 independent entrepreneurs and 20 intrapreneurs (entrepreneurs working in large corporations) shows that 75 percent of independent entrepreneurs consider themselves risk-takers and having the ability to influence the outcome of their business goals. For example, one of the respondents to this survey, Peter de Savary, points out:

“I suppose I’m a risk-seeker. Business is like chess and you’ll find a lot of entrepreneurs play chess... It’s something that you are born with, it’s not something you can ever learn” Jennings et al. (1994: 116).

Another important characteristic of entrepreneurs is tolerance for ambiguity. At firm level, Alvarez and Busenitz (2001) argue that causal ambiguity – the uncertainty regarding the causes of efficiency differences among firms – may be the essence of entrepreneurship because it prevents other firms from imitating. At individual level, similarly, Begley and Boyd (1987) argue that opportunity exploitation involves ambiguity, and people who have a greater tolerance for ambiguity may be more likely to exploit opportunities.

The last characteristic of entrepreneurs that has been widely discussed in psychological theories for decades is motivation. McClelland (1961), for instance, argues that “high achievement
motive” is a driving force for entrepreneurs to gain economic achievement by seeking opportunities. Current research also shows that intrinsic need for achievement is a driving force for entrepreneurial success. For example, a longitudinal study conducted by Sibin Wu et al. (2007) on nascent entrepreneurs in a metropolitan area of a mid-western state in the US shows need for achievement is positively related to entrepreneurial persistence; meaning, entrepreneurs who have a higher level of need for achievement, stay in business longer and consequently, have a higher chance of success.

**Culture and entrepreneurship**

Culture is referred to as collectively held values that distinguish the members of one human group from those of another (Hofstede, 1980). The cultural orientation of a society reflects the complex interaction of values, attitudes, and behaviors displayed by its members (Adler, 2008; Hofstede, 1998). Therefore, as Rogers and Steinfatt (1999) argue, culture has very powerful effects on individual behavior including entrepreneurial behavior. As Anisya and Mueller (2000) argue that entrepreneurs, like their managerial counterparts, while they might share some universal traits [like attitudes toward achievement, affiliation, autonomy and dominance], they reflect the dominant values of their national culture. For instance, a study done by Redding (1980) shows Asian entrepreneurs rely on familial ties in developing their businesses. Or, another study conducted by Min and Bozorgmehr (2003) on Korean and Iranian immigrant entrepreneurs in Los Angeles, US, shows a significant difference between these two groups. For example, Korean immigrants rely on ethnic resources, whereas Iranians rely on class resources. Korean businesses are smaller, concentrated, and serve more co-ethnic low-income minority customers, while Iranian immigrants are larger, mores dispersed and largely serve white customers. With all other
factors being equal, we can assume that the Korean and Iranian cultures are the major factors influencing the behavior of Korean and Iranian entrepreneurs in Los Angeles.

**Theoretical model**

The role of culture on entrepreneurship has been studied by some scholars (e.g., see Hayton et al., 2002); however, it is still under-studied and under-researched. Therefore, based on cultural and psychological theories of entrepreneurship [discussed above] we developed the following model.

As shown in figure 1, creation of a new firm and subsequently the success of the entrepreneur are our dependent variables. Independent variables are entrepreneur’s knowledge about business, entrepreneur’s motivation, entrepreneur’s personality, entrepreneur’s environment (e.g., family environment, society and national economy). Entrepreneur’s culture is a control variable that influences entrepreneur’s knowledge (e.g., tacit knowledge about business), motivation (e.g., whether to become an entrepreneur or not), personality (e.g., the degree of taking risks) and environment (e.g., family supports for starting a business).

![Figure 1: Theoretical model: the role of culture on entrepreneur’s success](image-url)
**Empirical Research**

**Research methodology**

The method we used to examine the above model (Figure 1) is a combination of field research combined with case study method. A case study inquiry allows investigating a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2003: 13). If we consider entrepreneurial behavior [that leads to entrepreneur’s success] as a phenomenon and entrepreneur’s national culture as a context, we realized that the boundaries between these two are not clear. Mongolian culture, like other Asian collectivistic cultures, is a *high-context* culture (Rogers and Steinfatt, 1999). In high-context cultures, according to Edward T. Hall (1989, 1976), communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message. The behavior of individuals in this context is influenced by explicit and uncoded cultural elements that cannot thoroughly be captured by quantitative methods such as a survey research. Thus, to study the interaction between culture and individual behavior of entrepreneurs we need to utilize research methods such as a field survey or a case study that allow us to have more in-depth observations.

**Research design**

According to theoretical model (Figure 1), we designed a semi-structured questionnaire. As shown in table 1, for examining entrepreneur’s knowledge background and level, we asked a couple of questions about whether she had relevant education and relevant work experience prior to beginning the business. To examine entrepreneur’s personality, we used the “Big Five” traits model. This model is supported by an impressive body of research and encompasses most of
significant variation in human personality (Barrick and Mount, 2005; Robbins and Judge, 2010). The Big Five model consists of five dimensions (Barrick and Mount, 1991): *Extraversion* (being ambitious, initiative, sociable, exhibitionist, gregarious, assertive, talkative and active); *Emotional Stability* (being anxious, depressed, angry, embarrassed, emotional, worried and insecure); *Agreeableness* (being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted and tolerant); *Conscientiousness* (being dependable, careful, thorough, responsible, organized and planful); and *Openness to Experience* (being imaginative, cultured, curious, original, broad-minded, intelligent and artistically sensitive). Based on this model, as shown in Table 1, several questions were outlined to examine the personality of female entrepreneurs.

As discussed before, motivation is a driving force for entrepreneurial activities and personal achievement. Motivation is the processes for an individual’s intensity, direction, and persistence of effort toward attaining a goal (Robbins and Judge, 2010). Frederick Herzberg’s two-factor theory, also known as *motivation-hygiene* theory, is one of the well-known motivational theories, which was developed from a large pool of empirical data. According to this theory (Herzberg, 1959, 2003), people are motivated by a combination of *intrinsic factors* (motivation factors) such as achievement, recognition and responsibility—and *extrinsic factors* (hygiene factors) such as supervision, pay, company policies and work conditions. In most studies on personality of entrepreneurs, intrinsic factors have been emphasized as the main motivational factors for entrepreneurs versus non-entrepreneurs or managers. As shown in Table 1, based on a two-factor theory, several questions were outlined to examine whether female entrepreneurs have intrinsic or extrinsic motivations.
There are five environmental factors, frequently cited in the literature, that play a role in the development of entrepreneurial firms (Gnyawali and Fogel, 1994): *government policies and procedures* (such as restrictions on imports and exports, provision of bankruptcy law, entry barriers); *socioeconomic conditions* (such as public attitude toward entrepreneurship, existence of persons with entrepreneurial characteristics, diversity of economic activities and extent of economic growth); *entrepreneurial and business skills* (such as technical and vocational education, business education and availability of information); *financial support to businesses* (such as low-cost loans, venture capital, alternative sources of financing); and *non-financial support to businesses* (such as counseling and support services, entrepreneurial networks, government support programs, tax incentives and exemptions and entrepreneurial networks).

For culture, we did not use any theory. As Peterson (1988) argues, ‘the U.S. culture of individualism and achievement has dominated the world view of entrepreneurship’. To reduce this bias, we decided just to ask entrepreneurs what role they think Mongolian culture played in the creation and success of their businesses.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Questions</th>
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<tbody>
<tr>
<td>Entrepreneur’s prior knowledge</td>
<td>What was the level of your education before starting this business?</td>
</tr>
<tr>
<td></td>
<td>What is the level of your education now?</td>
</tr>
<tr>
<td></td>
<td>Do you have relevant education, like business or tourism education?</td>
</tr>
<tr>
<td></td>
<td>Did you have knowledge about this business before starting this business?</td>
</tr>
<tr>
<td></td>
<td>Did you have foreign work or job experience before?</td>
</tr>
<tr>
<td></td>
<td>What was your main motivation for starting this business?</td>
</tr>
</tbody>
</table>
## Entrepreneur’s motivation

- Was it merely making money?
- Was it creating job for yourself and your community?
- Was it fulfilling your aspiration and having a successful career (self-fulfillment and personal achievement)?

## Entrepreneur’s personality

- How do you characterize yourself?
- Are you open to new ideas and experiences?
- Are you an agreeable person? Do you trust your colleagues and employees?
- Are you a sociable person? Do you make new friends easily?
- Are you a dependable and persistent person?
- Are you emotionally stable? When you have problems at work, do you usually stay calm and maintain your self-confidence or do you feel lot of stress and lose your self-confidence?

## Entrepreneur’s environment

- Did you have family (e.g., father, mother or husband) support for starting this business?
- Did you any support for the Mongolian government for starting and continuing your business?

## Entrepreneur’s culture

- What role you think the Mongolian culture played in your business? In creation of your business and in the success of your business? If you came from another culture, for example, American culture, do you think you could still succeed in Mongolia?

### Table 1: Semi-structured Questionnaire

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<th>Cases: research operationalization</th>
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13
Case 1: Tseren Tours

In 1991, Rik Idema quits his job in The Netherlands to fulfill his lifetime dream: “bicycle touring around the world”. In 1992, while peddling in Mongolia, he meets Tseren Enebish, his future wife. Two years later, in 1994, they receive an offer from a Dutch company to organize cycling trips in Mongolia. They decide to take this opportunity and establish a company called Tseren Tours, named after the co-founder. For the first time, in 1994, by using the license of another tour agency, they organize a 3-week mountain bike tour through central Mongolia. The next year, they expand their business and start to bring groups of adventure seekers directly from Europe. In 1996, they expand their touring territories and go to the far western provinces to research hiking possibilities in the high Altai Mountains so that they could offer original itineraries. In 1997, by the request of ex-mountain climbers, they organize their first hiking tour in western Mongolia. In 2001, they organize their first “Horse Treks” for groups in the Hanggai Mountains and the Khentii Mountains. In 2002, for the first time, the company organizes a Fishing tour. In subsequent years, they add specialized activities such as canoeing and camel treks. They still continue expanding their services to the extent that in 2005, they organized two concerts in the Opera and Ballet Theatre for the famous Inner Mongolian singer, Urna, on her first visit to Mongolia (coming from China). Today, they offer a wide range of tour packages including Canoeing, Trekking, Horse Trekking, Special Interest Travel and Jeep Tours.

Interview with Tseren Enebish

Tseren was born in a small provincial capital, Bayanhongor. The co-author of this paper, Todd Terhune, had met Tseren on numerous occasions and knew her through trekking tours. Last summer, when both of us were in Mongolia, we did not have a chance to see and interview her
face to face (she was guiding a tour). Therefore, we decided to interview her via Skype video conferencing. This is what she said based on our semi-structured questions (Table 1):

"After I finished my basic education, in 1992, I entered fine art school and graduated. It was not an academic school but just a college. So, I don’t have any academic degree in fine art. Also, I haven’t done any formal business, tourism or English education either.

Before I started my business, I had no prior knowledge about the tourism business. About 17 years ago, not many people spoke in English in Mongolia. Hence, before starting my business, my huge interest in learning and speaking English helped me to go abroad—country to country, meeting other people and networking with other people. But when my husband and I started the business, we had a hard time because we not only didn’t have any work experience in Mongolia, but also, didn’t have any marketing strategy.

About motivation, my main motivation to start the business was curiosity. I’ve always wanted to travel new places around the world and wanted to know different kinds of people. In addition, in a closed country that I had grown up, communicating with other country was hardly imaginable thing to do at that time. So, I wanted to start to do something special like communicating with other people, with other language. And another big motivation was the desire to travel in my own country, Mongolia. At that time, I thought that I had never traveled in Mongolia before, although I lived in this country. So, this motivated me to start a tour business in Mongolia.

Besides, I cannot deny that one of my motivations was making money because I had to make a
living as well, at that time. I had no money when I started the business but money was never my first priority in starting the business.

Actually, I didn’t get any financial support from none of my family members for starting this business. But I’ve got emotional support from my mother specially. She still supports me emotionally. She helps me become emotionally stable when I am upset or stressed out. She does not judge me, always cheers me up by saying “everything will be fine, don’t worry”. Besides, I did not get any support from the Mongolian government for starting the business. Now they want to support me! And I can get support from the Mongolian government because my business is grown and is well-known. But at that time that I needed their supports, they did not give me any financial support to small and medium sized companies. Also, banks were same. They were not interested in lending any money to my small company. But after my company success and expansion, I could easily borrow money from the banks.

I consider myself as a very open-mined person. I am always open to new ideas and experiences so that I do not judge everything and everybody too fast. I am not authoritative person. I’ve never seen myself being a tough boss or stiff leader. To become an acquaintance with me, it’s easy, perhaps; but making friendship with me, is not so easy. I can talk with others easily but hard to make a close relationship with them. I wouldn’t say that I am very well organized and dependable person. But I am not sure that if I am a persistent person or not. (Interviewer: persistence means you do not give up easily. Once you start something, you continue until you finish it to achieve your goals.) In that case, I am a persistent person. And if I have troubles at work I wouldn’t keep it to myself. I have to speak about it. Lastly, about my self-confidence, I
would say “sometimes yes” and “sometimes no”. Sometimes, I think that I am very self-confident but sometimes I do not feel so confident.”

Case 2: Golden Gobi

Golden Gobi is tour and guesthouse company in Ulaanbaatar that offers a wide range of tour packages and affordable accommodations for independent and group travelers. It was founded in 2005 by N. Ulamtuya (known as Ogie) and her three sisters who originally came from countryside in south Gobi desert. To accommodate foreigners, in 1996, their uncle opened a company and named it after himself: Idre’s guesthouse. At that time, this kind of business was quite new in Mongolia. In the same year, Ogie and 16-year-old Erika started working for their uncle’s company. Ogie was working as an English translator and Erika as a Japanese translator. While working in Idre’s guesthouse, Ogie was volunteering for couple of charity organizations in the countryside. This gave her a chance to work with international volunteers as well.

In 2005, with over 10 years experience in tourism and hospitality and driven by the desire to support nomad families, Ogie opened “Golden Gobi” guesthouse. The name was chosen by their mother who always supported them emotionally and spiritually. In that year, they started their tour guide business with the help of siblings (a brother and three sisters) and few family drivers. Since Ogie knew all the shingles and pebbles in the country, they started organizing tours to every part of Mongolia. The first year, without any advertising or even having a website, they received several hundreds tourists from all over the world. In 2009 alone, they accommodated
more than 2000 tourists from all over the world and offered customized tours to more than 1000 tourists.

Now they are internationally recognized among tourists and travel agencies. They recently opened a second location Golden Gobi 2 in the capital. They have currently more than 30 drivers and 30 guides working for them who can speak English and Japanese well. Besides, they have several cleaning and laundry ladies and tour and office staffs. Most of their employees are their relatives coming from all over Mongolia (21 provinces), particularly, from their home country, south Gobi region. Like Tseren, we interviewed co-founder and younger sister Erika via Skype video conferencing. This is what she said based on our semi-structured questions (Table 1):

“I recently completed my MBA in international business management in Virginia International University, Virginia Fairfax city, USA. But before 2005, when we started this business, my sister and I didn’t have any degrees in business. Although my sister took some certificate course in business but it was not formal education. Instead, we were both English teacher before we started the business. I had a Bachelor degree in teaching English and my sister majored in teaching English.

Before my sister and I started this business, we worked in a tour company called: Edri Tour. It was my uncle’s company and probably was the first guest house in Mongolia. Although they were guest house, they also did works which were similar with what we are doing now: such as organizing trips, accommodating people, and managing tours not only backpackers but also VIPs. So, we had some prior knowledge about this business by working in our uncle’s company.
Before we started this business, we both were tour guide in my uncle’s company. And when we worked in that company, lots of people told to my sister that she could actually do this business on her own. People could easily notice her leadership and communication skills and her ability to make people to work together. So, she was motivated by other people’s encouragement. And another motivation was our willingness to provide the job and work to jobless people in Mongolia. At that time and even now, there are lots of jobless people, especially, in south Gobi area. So, as people who are originated from south Gobi region, we wanted to support nomads and people who live in the country side to earn extra money to sustain their livelihoods.

We got lots of support from our entire family member. As you know, Mongolian family culture is very united and very collectivistic culture. So, they easily support each other. Therefore, when we started this business, our whole family members supported us including my mother, father, brother, and sisters. Not only they supported us emotionally, but also they supported us financially and physically. But we didn’t get any financial or regulatory supports from the Mongolian government. Mongolian government might have some supporting programs for new venture entrepreneurs but we couldn’t get any supports from them.

Actually, lots of people emphasize that we are one of the kind and sociable people. And we both are very open minded and open to new ideas. We haven’t traveled much all over the world, yet. So, we try to travel a lot and often meet many people and experience other cultures. For that reason, we naturally have to be open minded and sociable people. And we easily trust our colleagues so we never force our workers to work for us. My sister, in fact, is very self-confident, in a way that, she always does her work confidently.
I cannot deny the fact that Mongolian culture helps us a lot to start and run our business. Mongolian culture is amazing, especially, the Mongolian hospitality culture helped us a lot and still it does. For example, when we travel to country side, Mongolian nomad families always welcome us and offer us their food and shelters (in many cases for free). But this offering is hard to imagine in Western individualistic culture, like the USA. And also nowadays, changing status of women helped us a lot to start and run our business. Actually, Mongolian culture is very similar in the other Asian culture when it comes to women’s social status. So, until the end of the communist era, Mongolian were clearly separated the role of men and women—so that, women could only do housework like cleaning the house, raising children and staying at home. But nowadays, things have changed a lot. Women are freer to express their self and freer to voice their opinion. Hence, we could easily start the business because the society encourages women to go outside and have jobs like men.”

Discussion

Entrepreneur’s knowledge

The findings of the interviews are summarized in Table 2. With Tseren Tours, the entrepreneur had little, if any, prior knowledge about tourism and hospitality before starting her business. With Golden Gobi, however, the original founder of the business (the elder sister, Ogie) had extensive relevant work experience (tacit knowledge) about this type of business. Given the achievement that Tseren Tours had in establishing themselves as a successful tour company in Mongolia, importantly, not changing their business model, we may argue that the prior knowledge of the entrepreneur played an insignificant to a moderate role in the creation of a new venture firm. At the same time, however, we may argue that it played a significant to major role
in the success and growth of a new firm. For instance, in our interview, Tseren emphasized that due to a lack of knowledge of marketing strategy, managing the firm was a very difficult task for them. Golden Gobi co-founder also emphasized that the main reason that she decided to go to a graduate school in the USA and obtain an MBA degree was the need for having relevant knowledge about managing and running their business. These findings are in accord with previous studies by Stevenson (1986) that even though women entrepreneurs tend to be well-educated, they often do not have an educational background in business.

**Entrepreneur’s motivation**

The Tseren Tours’s co-founder emphasized that she had high motivation for starting her business. Meanwhile, she wasn’t motivated by money or even by the desire of creating jobs for herself or for her community. She was motivated by the desire of adventure and curiosity about visiting and discovering different parts of her native country, Mongolia. The co-founder of Golden Gobi emphasized that they had high motivation for starting their own business as well; however, they were mainly motivated by the desire of creating jobs for themselves and for other people, especially, for the people in the south Gobi region where they originally come from. Therefore, based on the findings of these two cases, it not possible to make any assertion about the type of motivation and the creation of new venture firms. Nevertheless, both entrepreneurs emphasized that they had high Achievement motivation for the growth and success of their firms. This is in accord with the previous research and studies (most notably, McClelland studies and Sibin et al. research) that high Achievement motivation plays a major role in the success of entrepreneurial firms.
Entrepreneur’s personality

The co-founder of Tseren Tours emphasized that before starting her businesses she was open to experience, was a risk taker and, to some degree, a sociable person. The co-founder of Golden Gobi also emphasized that her elder sister was open to new experience, a risk taker, a confident and quite sociable person. In these two cases, openness to experience and risk taking were the common personality traits. Therefore, we can argue that these two personality traits play a more important role than other personality traits (like agreeableness or sociability) in the creation of new venture firms. Meanwhile, agreeableness and sociability personality traits played an important role in both firms’ success and growth. At the same time, however, sociability might play an important role in this type of business and might not play an important in other types of firms, like technology firms for instance.

Entrepreneur’s environment

In our interview, Tseren Tours’s co-founder emphasized that for starting, especially, for continuing her business, the main source of support was her mother’s emotional support. In spite of her difficulties, her mother inspired and encouraged her to start and continue her business. However, she did not receive any financial, physical or emotional support from other members of her family. The co-founder of Golden Gobi, on the other hand, emphasized that for starting and for continuing their business, they received enormous support from all the family members and even from friends. Therefore, based on the findings of these two cases, it is difficult to make any assertion about entrepreneur’s supportive environment and the creation and success of venture firms. At the same time, in both cases, the entrepreneurs emphasized that they did not receive any sort of financial or non-financial support from the Mongolian government. Again,
based on these two cases, it is difficult to make any assertion about the role of government in the creation and success of entrepreneurial firms.

**Entrepreneur’s culture**

The Mongolian traditional way of life is nomadic – i.e., breading livestock, living in tents called ‘Ger’ or ‘Yurt’ and moving from pasture to pasture in different seasons. Thus this way of life is very labor-intensive, which requires the help and involvement of not only all the adults but also all the children in a family. Also, communist governments (1924-1990) for secularizing the society encouraged active involvement and participation of women in all aspects of their social life. Therefore, Mongolia has a unique culture: on one hand, it is an Asian collectivistic culture (family- and long-oriented), on the other the hand, via Russia as a long-time big brother, it has been greatly influenced by Western secular culture. It is no surprise that according to Lonely Planet (Kohn, 2005), Mongolians consider themselves Asian by ethnicity and Western by culture.

In our interviews, Tseren and Golden Gobi both emphasized that Mongolian culture played an important role in the creation and success of their businesses. Tseren told us that for starting her business she was inspired by the Mongolian culture of adventurism. After finishing her high school and entering college, she started traveling to other countries to learn English and explore other cultures. And when she came back to Mongolia, she realized that she had traveled to many countries but hadn’t yet seen many parts of Mongolia. When she met her husband, Rik (originally from Holland), they thought the best way to travel in Mongolia was to start a tour company. She emphasized that for continuing and succeeding in her business her mother’s emotional support was very helpful. She always inspired her to continue without having worries.
Golden Gobi’s co-founder also emphasized that for starting and for the success of their business they received lots of support from their family members. She also told us that they benefited a lot from the Mongolian culture of hospitality. For instance, from our experience when traveling in Mongolia, we observed that tour companies leverage the Mongolian culture of hospitality to accommodate tourists. This way of accommodation is so reliable for tour companies that with no worries they take tourists to different parts of Mongolia. She emphasized that after the end of the communist era, the country went through lots of changes. One of the changes that had positive impact on women entrepreneurship was the freedom for women to express their views and voice their opinions. As a result, she told us that they could easily start their business because society nowadays encourages women to go outside and obtain jobs conventionally held by men—like entrepreneurship.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Firms</th>
<th>Tseren Tours</th>
<th>Golden Gobi</th>
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<td>Firm Creation</td>
<td>Firm Success</td>
<td>Firm Creation</td>
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<td>Entrepreneur’s knowledge</td>
<td>Limited traveling experience, moderate role. No relevant education</td>
<td>Limited marketing and management experience. No relevant education</td>
<td>Prior similar work experience, major role. No relevant education</td>
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<td>Entrepreneur’s motivation</td>
<td>Adventure, curiosity</td>
<td>Achievement</td>
<td>Job creation</td>
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<td>Entrepreneur’s personality</td>
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<td>Persistent, agreeable, sociable</td>
<td>Open to experience, risk taking, confident, sociable</td>
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<td>Entrepreneur’s environment</td>
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<td>Mother’s and husband’s emotional support, major role. No support from Mongolian Government</td>
<td>Entire family’s emotional, physical and financial support, major role. No support from Mongolian Government. Support from family and friends</td>
</tr>
<tr>
<td>Entrepreneur’s culture</td>
<td>Mongolian adventuring culture, empowering women culture, major role</td>
<td>Mongolian family culture, major role</td>
<td>Mongolian family culture, empowering women culture, major role</td>
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Table 2: Cross-case Analysis
Conclusion

Mongolian culture is an Asian collectivistic culture that nurtures collective values such as family, community and national long-term values. At the same time, due to the close link with Russia during the communist era, the Mongolian culture was influenced by the feminist culture of equal status for women. In addition, after the communist era, Mongolia has witnessed a resurgence of Mongolian nomadic culture, which inspires individual self-reliance, liberty and adventurism. From our field observations and our case studies, we can conclude that in our theoretical model (Figure 1), entrepreneur’s knowledge about business and entrepreneur’s motivation are influenced by the Mongolian nomadic and feminist culture, while entrepreneur’s personality and entrepreneur’s supportive environment are influenced by both the nomadic and Asian collectivistic cultures. Then, finally we can conclude that these three dimensions of Mongolian culture influence and manipulate entrepreneur’s behavior and entrepreneur’s supportive environment consequently influence the creation of a new firm and the success of women entrepreneurs.

Further Research

For a wider generalization about the role of culture on female entrepreneurship, there is a need for quantitative survey research and statistical data analysis, e.g., Structural Equation Modeling (SEM).

Acknowledgement

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References
Interviewees:
Tseren Enebish, co-founder of Tseren Tours
Erika, MBA, co-founder of Golden Gobi


HUMAN RESOURCE PRACTICES AND FRONTLINE MANAGER INVOLVEMENT IN SMALL AND EMERGING FIRMS: AN EXPLORATORY ANALYSIS

Jeffrey Hornsby, William Wales, Jake Messersmith, Jennifer Bott

Abstract

Small businesses which may or may not have a human resource professional on staff are likely to rely heavily on frontline managers to perform many of the basic human resource functions. However, little is known about the extent of this practice or how satisfied frontline managers tend to be with their involvement in HR processes. Survey results from 111 businesses of varying size were collected and analyzed. Results indicate that supervisor involvement in HR activities is predicted by employer size. Analysis of variance reveals significantly greater supervisor involvement in the areas of planning, wage increases, and safety administration. However, as frontline manager involvement increases, their satisfaction with the organizations hiring and performance appraisal processes tends to decrease. Overall, it appears that supervisors become more involved in HR practices as company size increases, but this greater involvement tends to come at the price of satisfaction with key aspects of the HR function.

Introduction

Given the prevalence of small and medium sized enterprises and their importance to the overall economy, (Gudmundson, Tower, and Hartman 2003; Headd and Kirchhoff 2009; Liberman-Yaconi, Hooper, and Hutchings 2010; Payne, Kennedy, and Davis 2009) the success factors within this segment remains a salient area of investigation. One element of small firm development and success that has seen many calls for increased research attention is the role that human resource management (HRM) policies and practices play in smaller organizations (Hornsby and Kuratko 2003; Heneman, Tansky, and Camp 2000). People management issues are likely even more important in small and medium sized enterprises, where stocks of physical capital and slack resources are less likely to be present (Cardon and Stevens 2004; Hornsby and
Kuratko 2003; Tocher and Rutherford 2009). In addition, human resource management issues are clearly on the minds of small business owners. For example, in a large sample of SME business owners, Tocher and Rutherford (2009) report that 21% of respondents indicated that a subject related to human resource management was the most critical issue they were facing. Furthermore, a recent study of firm failures reported that managerial incompetence was one of the most frequently cited reasons for the firm’s failure to become and remain a viable enterprise (Dun and Bradstreet 2001).

These findings suggest that additional research is needed into the role that managing human resources plays in the performance and survival of small firms. This study adds to the discussion of HRM in small businesses by examining the role of a critical stakeholder – frontline managers – in HR activities and decision-making within small firms. In smaller organizations frontline managers or supervisors frequently “where multiple hats,” including that of human resource manager (Hornsby and Kuratko 2005). This study examines the level of supervisor involvement in HR practices across different sizes of enterprises ranging from small to large, and within different industry segments. In addition, this paper addresses the level of satisfaction with various dimensions of HR practices across these varying contexts.

In investigating these two research questions, the paper builds on a small, but growing body of literature addressing HR sophistication in small business (i.e., Hornsby and Kuratko 1990; Kotey and Slade 2005) and also extends the discussion of HR practices beyond the HR department to a specific discussion of the role and importance of frontline manager involvement with HR activities (Hermans, Wright, Ulrich, Sioli 2009; Ulrich, Allen, Brockbank, Younger, and Nyman 2009). The remainder of the paper is organized as follows. First, the existing literature on HRM in small business is reviewed. Following this discussion we theoretically
highlight the important role that frontline managers play in the proper management of human resources in small businesses. This assessment is followed by an empirical test of the utilization of HR practices across businesses of varying size to compare small firms with medium to larger sized organizations, the level of frontline manager involvement with HR within these businesses, and frontline manager satisfaction with HR outcomes in these firms. We conclude with a discussion of the study findings as they apply to the role of frontline managers in HR decisions.

**Human Resource Management in Small Businesses**

While extant research is limited with respect to the role of HRM in small businesses, current work suggests that the practice of effective human resource management is integral to the success of small to medium sized businesses (Deshpande and Golhar 1994; Hayton 2003; Hornsby and Kuratko 1990; Messersmith and Guthrie 2010; Jones, Morris, and Rockmore 1995; Smith 1991; Wager 1998; Way 2002). In fact, Marlow and Patton (1993) argue that the effective management of human resources is a key to survival for smaller firms.

Theoretical discussions of the prospects for HR’s future strategic role in organizations (e.g., Becker and Gerhart 1996) have led researchers to examine the most effective configurations of HR practices and how these configurations can be leveraged to build an effective HR architecture (Lepak and Snell 1999). However, the weight of this scholarship has analyzed large and well established businesses, leaving investigations of HRM in small and growing businesses in a more embryonic state. Despite the fact that these businesses make up the majority of firms in the United States (U.S. Small Business Administration 2007), much less research exists to help us understand the dynamics of effective HR administration in these firms (Heneman et al., 2000), and the vital role that frontline managers are likely to play in these processes. Therefore we endeavor to investigate this key organizational resource. Below we
review the extant literature to date on the role of HR in small firms, followed by a review of the literature exploring the involvement of frontline managers in the organizational HR function.

**Recent Literature on the Human Resource Role in Small Firms**

Research on HRM practices within smaller, less established, firms has received multiple calls for investigation in order to provide a better assessment of the needs, concerns, challenges, and strategies of this important body of organizations (Heneman et al., 2000; Purcell 1993; Williamson 2000). Employees represent a critical resource that often makes the difference between success and failure in smaller firms (Tocher and Rutherford 2009). This is because smaller firms generally suffer from lower levels of slack resources, lesser degrees of efficiency when using their resources, as well as inferior legitimacy associated with the products their resources produce (Stinchcombe 1965; Thornhill and Amit 2003). This often remains the case even as the firm begins to grow. Until organizations reach substantial size they may still suffer from “liabilities of smallness” which hinder their efforts to procure and efficiently use critical organizational resources (Freeman, Carroll, and Hannan 1983). It is, perhaps, not surprising that Thornhill and Amit (2003) observe the failure of small firms to be generally attributable to a lack of resources and capabilities. Thus, in many cases, the owner or manager of a small business assumes responsibility for a bulk of the human resource functions, since he or she is usually unable to devote financial resources to employ HR professionals.

Early work on HR management in small businesses tends to suggest that HR issues are less prevalent in the minds of small business owners. For instance, an early study of HRM practices in smaller ventures found that the areas of accounting, finance, production, and
marketing all take precedence over developing the human resource management function (McEvoy 1984). Little (1986) observed that the owners of firms with less than 50 employees typically handled the HRM function themselves. In addition, Amba-Rao and Pendse (1985) surveyed the compensation and maintenance practices of 78 small firms and found that most firms lacked any systematic or rational approach in their compensation practices.

In a study of sixteen manufacturing firms, Duberley and Walley (1995) conclude that a wide variety of HR practices exists among firms, yet few had developed an integrated set of strategic HRM practices. Wager (1998) further studied the determinants of HRM functions in small Canadian firms and found that less than half of the companies surveyed utilized formal appraisal (50 percent), sexual harassment policies (35 percent), employee pensions (30 percent), total quality management (34 percent), employee assistance programs (21 percent), employee attitude surveys (27 percent), and employee relations (19 percent). The research also showed that firms which emphasized open communication and employee participation were much more likely to have formal HRM procedures. More recently, an assessment of small and medium sized enterprises in the UK revealed that 64% of the 100 firms surveyed had no formal HR strategy, despite the fact that most felt that HR practices were useful (Cassell et al., 2002).

While this body of work paints a grim picture of the perceived importance of the HR function in small business, there is evidence suggesting that some smaller firms are progressing in the development of HRM practices and policies. Hornsby and Kuratko (1990) studied 247 smaller firms and found that firms under 50 employees had very little in place regarding formal HRM practices; however, firms with 50 to 100 and 101 to 150 employees had more sophisticated HRM practices in place. Hornsby and Kuratko (1990) observed that as organizations grew, so did the formality of their HR systems, especially for job analysis, recruitment, compensation, benefits and incentive plans. However, in practice less than half the firms surveyed employed any formal HRM practices. Hornsby and Kuratko (2003) performed a ten year follow-up of their
initial 1990 study and found similar results in place, which suggests that advancements in practice have lagged behind the theoretical lessons advanced within the small, but growing, literature devoted to understanding the manifestation and consequences of HR practices in smaller firms.

A notable study by Kotey and Slade (2005) assessed human resource management practices in micro, small, and medium firms in Australia and further found that human resource practice utilization (specifically recruitment, training, and performance appraisal) begins early in the growth process and proceeds at a faster rate than during latter growth phases. They also found that the adoption of formal HRM practices at the managerial level lagged behind the operational level in smaller firms. It is also concluded that in micro and small businesses, an informal practice of HR may in fact be necessary to facilitate firm growth at those stages.

Taken together this literature seems to suggest that despite the important role that HRM can play in firm success a) small to medium sized businesses are often slow to adopt HR practices, and b) the adoption and implementation of such practices is generally not under the guidance of full time HR professionals. Who then is tasked with this important role? Certainly, the small business owner himself plays an important role in the smallest of firms, but in larger firms it is likely that frontline managers accept the responsibility of not only managing their lines and functions, but also of implementing many of the functional elements of HRM (i.e., selection, training, performance appraisal, promotion and compensation decisions, information sharing, discipline, etc.). Yet this important organizational resource is rarely analyzed in studies of human resource management. This begs the question – to what extent, and with what consequences, are frontline managers involved in the HR function as firms grow?

**Frontline Manager Involvement in HR Management**
Managers below the level of top executives and directors have been the focus of recent attention in entrepreneurship research (i.e., Floyd and Lane 2000; Kuratko, Ireland, Covin, and Hornsby 2005). These studies have theorized that middle managers and operational level managers play an important and often overlooked role in the execution of firm strategy, and ultimately in the performance of the firm. In the present research we focus on the operational level and the role of frontline managers. We define frontline managers as all functional leaders within the organization who may carry such titles as supervisor, team leader, or unit manager that have direct interaction with operational level employees. As discussed, since many small organizations do not have a designated human resource professional or a formal human resource structure, the responsibility of managing, identifying, and developing key personnel often is bestowed on the line managers (Hornsby and Kuratko 2005). Even once formal human resource representatives emerge within the firm, managers may continue to implement many HR functions while the HR representatives administer and coordinate these activities.

As stated by Ulrich et al. (2009) “line managers are ultimately accountable for ensuring that the organization has the right talent and right organization in place to deliver on expectations to customers, shareholders, and communities” (p. 129). In other words, many of the value-adding aspects of the HR function are often handled by line managers. Specifically, managers are usually responsible for interviewing, training, appraising, and disciplining their subordinates. In addition, managers play important roles in compensation, safety, job analysis, and planning. According to the U.S. Small Business Administration Office of Advocacy (2007) firms with fewer than 500 employees represent 99.9 percent and firms with less than 10 employees represent 78.6 percent of the 29.6 million businesses in the United States. This implies that supervising frontline managers are likely to play a critical role in the HR function for the bulk of
organizations in the United States. Therefore, although little research has been devoted to exploring the involvement of frontline managers in the organizational HR function, these organizational actors serve as the first-line human resource manager for their company and it is logical to expect that their role will be even greater in smaller firms, where the existence of a human resource department is less likely.

The Current Study. Given the recognized need to address HR issues in smaller firms (Heneman et al., 2000), and the vital role that frontline managers are likely to play in these processes we endeavor to investigate this key organizational resource. Specifically, as stated above the purpose of this paper is to examine the use and satisfaction of human resource practices by frontline managers in small and growing firms. Specifically, this study examines the extent to which firms recognize the practice of effective human resources, the extent to which their frontline managers practice effective human resources, company satisfaction with these activities, and the amount of human resources training that firms provide for frontline managers. As this was an exploratory study, no specific hypotheses are advanced; however, company size was expected to differentiate involvement in and satisfaction with the various aspects of human resource management (e.g., hiring, training, performance appraisal).

Method

Sample

Three hundred emerging companies located in the Midwest United States were sent a survey concerning their company’s practices regarding frontline HR management. Student research assistants were utilized for survey distribution and data collection. Using a surveying methodology similar to that employed by McEvoy (1984) and Hornsby and Kuratko (1990; 2003), research assistants utilized Chamber of Commerce directories to develop a target sampling pool. These directories were the same data source used in the Hornsby and Kuratko
(1990) study. Probable respondents were contacted and asked to participate. Surveys were then distributed and collected by the research assistants. The respondents were further divided into three size categories based on the theory that, in general, a company’s human resource practices will become more sophisticated as employment size increases. Specifically, three size categories were utilized. The first category included “smaller” firms with companies having 100 and under employees. The second category consisted of “medium-sized” small firms and included companies that employed between 101 and 500 employees. Finally, the third category consisted of “larger” small firms and included companies that employed between 501 and 1000 employees.

**Instrument**

The data were gathered by means of a 15-item questionnaire. The survey investigated each company’s demographic background (i.e., type of business, size, and revenues), frontline HRM practices in seven major areas (hiring/selection, HR planning, performance appraisal, training/coaching, wage administration, safety administration, and discipline/employee relations), and future concerns for the frontline manager’s role in HR. The respondents were asked to rate, using a five-point Likert scale, their frontline manager’s involvement with these functions and the extent to which these frontline managers are held accountable for these HR responsibilities. In addition, respondents were asked whether or not training is offered to frontline managers and the extent to which the training is offered. Finally, respondents were given a chance to list the most significant challenges facing managers and supervisors.

**Results**

A total of 111 surveys were returned, representing a 37% response rate. The majority of the sample reported working in the manufacturing industry (35.1%), followed by those in the public (21.6%) and service sectors (21.6%). A majority of respondents came from large companies (1001+; 24.5%) or moderate-sized companies (201-500; 23.6%). Revenue over 100 million was most frequently endorsed for the sample (29.5%), followed by revenue between one and five million (20.5%) and 10 to 50 million (19.3%). Most respondents identified themselves
as lower-level HR professionals (31.3%), followed by HR Directors (24.1%). The average experience of respondents was 12 years. Summary statistics for all variables, broken down by company size, can be found in Table 1.

We were primarily interested in determining whether organizational characteristics (i.e., employer size, revenue, industry) impacted frontline manager involvement and satisfaction with human resource practices in small and growing firms. As such, a series of regression analyses and analyses of variance were conducted to determine whether differences emerged as a result of organizational characteristics.

**Regression Analyses: Predicting Involvement and Satisfaction from Organizational Characteristics**

Of particular importance for small and growing firms is the importance placed on frontline supervisor and manager involvement in human resources. Organizational characteristics (i.e., employer size, revenue, and industry) were entered into a regression to predict importance of supervisor/manager role in human resources. Employer size emerged as the only significant predictor ($\beta = .42, p< .01$), accounting for 8% of the variance.

The prediction of satisfaction with various HR functions as a result of organizational characteristics was also examined. In terms of organizational characteristics, only employer size emerged as a significant predictor of satisfaction with hiring ($\beta = -.35, p< .05$) and performance appraisal processes ($\beta = -.39, p< .05$). For both of these predictors, the relationship with employer size was negative, indicating that satisfaction decreased within larger organizations.
Supplementary Analyses of Variance: Are There Differences across Firm Revenue and Industry?

In order to more fully understand the relationships between organizational characteristics and supervisor involvement in and satisfaction with various HR functions, a series of univariate analyses of variance across firm revenue and industry were conducted.

**Firm Revenue.** Supervisor involvement in planning activities significantly differed by company revenue ($F_{(5, 81)} = 2.41, p < .05$); Bonferroni post-hoc analyses indicated the difference was the result of those organizations reporting revenue between 50 and 100 million as compared to organizations with revenue below one million. An analysis of mean differences indicated more supervisor involvement in those organizations reporting between 50 and 100 million in revenue. Supervisor involvement in wage increases also significantly differed by company revenue ($F_{(5, 81)} = 1.40, p < .05$), with post-hoc analyses revealing no significant differences between categories of revenue. However, those organizations reporting revenues between 50 and 100 million appeared to be marginally significantly different from companies with one to five million in revenue ($p < .07$), with more involvement from companies with greater revenue. Lastly, company revenues differentially related to supervisor involvement in safety administration ($F_{(5, 82)} = 3.21, p < .01$), with differences occurring between companies reporting over 100 million in revenue as compared to those reporting between 10 and 50 million. Again, companies with higher revenue appeared to involve supervisors more in safety administration.

**Industry.** One analysis of variance was significant when examining industry differences in supervisor/manager involvement in and satisfaction with HR activities, as differences emerged on supervisor involvement in selection ($F_{(3, 103)} = 4.18, p < .01$). Post-hoc analyses indicated that supervisors in the public sector were more involved in selection than in manufacturing. In
addition, marginally significant differences were found across industries with respect to supervisor involvement in safety administration \( (F_{(3, 102)} = 2.64, p < .06) \); however, post-hoc analyses did not indicate a pattern of differences across the different industry classifications.

**Future HR Challenges Facing Frontline Managers**

Finally, the survey respondents were asked to list the future challenges that they perceive for frontline managers and their HR role. Responses were content analyzed and the results can be found in Table 2. The top five challenges cited include: Keeping up with and understanding laws and regulations; employee relations and discipline; consistency and fairness; finding quality employees; and training relating to safety, equality, and efficiency.

_____________________

Insert Table 2 about here

_____________________

**Discussion**

We were primarily interested in examining the extent to which human resource management practices (e.g., activities in the areas of hiring, training, performance appraisal, etc.) occurred in small business and frontline manager involvement in these activities. We were also interested in understanding the relationship between frontline manager involvement in HR activities and overall satisfaction with HR practices in the company. Specifically, we were interested in the differences that emerged between small and medium to moderately large organizations (operationalized as companies with 100 employees and under, 101 to 500 employees, and firms with more than 500 employees). Building upon a key trend within prior research suggesting limited formal HR management in small firms (Hornsby and Kuratko 2003;
Little 1986; Wager 1998), the demographic information presented in Table 1 suggests that less than half of the companies had formally designated HR professionals. Moreover, less than half the small firms surveyed provided formal HR training to supervisors within performance appraisal, training, wage administration, safety, hiring, and discipline.

Unfortunately, this lack of formal training may be detrimental to the success of small firms. As mentioned in the introduction, managerial incompetence is frequently cited as one of the main reasons underlying firm failure (Dun and Bradstreet 2001). One specific area of managerial incompetence continually cited is dealing with employee problems that include recruiting, selection, ineffective or nonexistent training, compensation and benefits, and weak or nonexistent performance appraisal (Hornsby and Kuratko 1990; Hornsby and Kuratko 2003). These complaints are likely to be even more pronounced in smaller firms when business owner/managers are unwilling to spend time and effort developing the expertise necessary to manage what is arguably his or her firm’s greatest asset - human resources.

In addition to these descriptive differences regarding the manifestation of HR activities between small, medium, and larger size companies, regression analysis was used to further understand the impact of company size. Additionally, supplementary analyses of variance were conducted to examine the possibility of differences across revenue or industry. Taken together, these analyses generally reflect the descriptive differences, with employer size serving as a significant, positive predictor of supervisor involvement in HR practices (accounting for 8% of the regression variance). Employer size was also a significant negative predictor of satisfaction with hiring practices and performance appraisal. Therefore, in larger organizations, frontline supervisors were more likely to be involved in HR practices, but less likely to be satisfied with
their greater involvement in such organizational HR practices as hiring and performance appraisal.

The emergence of more sophisticated HR systems with firm growth was supported within the results of the supplementary analyses of variance. With respect to the analyses of variance, company revenue appeared to differentiate frontline manager involvement in planning activities, wage increases, and safety administration. Supporting the regression results with regards to employer size, post-hoc analyses indicate that frontline manager involvement increased as firm revenue increased. Industry category was not found to be a differentiating factor in terms of frontline manager involvement, with one exception that showed supervisors in the public sector to be more involved in selection than in the manufacturing sectors. These results suggest that industry may not be a significant differentiator concerning frontline manager involvement in HR activities as the present results tend to be robust across different industry contexts.

These findings represent an important contribution to advancing theory and practice for several reasons. First, the present research sheds light upon the involvement of frontline managers in small and growing firms. It appears that supervisors in smaller firms tend to have less involvement in the administration of HR practices than when the organization begins to experience growth. As Kotev and Slade (2005) suggest, smaller firms may indeed benefit from less formal HR practices. As firms grow and frontline manager involvement in HR practices increases, their satisfaction with these practices tends to decrease. Taken together, for the most part larger firms (and those with more revenue, which is often used as a proxy for size), exhibit higher supervisor involvement but, somewhat paradoxically, less satisfaction with HR practices.

This lack of satisfaction with HR practices is an important contribution to the literature as it suggests that frontline manager satisfaction with HR practices tends to decrease as firms grow.
Given the espoused importance of frontline managers to an organization's ability to effectively manage its human resources and achieve its strategic objectives (Floyd and Lane 2000; Hornsby and Kuratko 2005; Ulrich et al. 2009), understanding and devising means of maintaining frontline manager satisfaction with HR practices represents a key managerial imperative as firms grow. We speculate that the observation of higher levels of satisfaction in smaller firms is due, at least in part, to factors associated with “smallness” that serve to increase the informality of HR administration. Smaller firms tend to possess more “organic” structures characterized by greater flexibility, more fluid communication, and higher levels of informal relationship driven interaction when approaching problem solving (Burns and Stalker 1961). When companies become larger, and more established, the formality of HR practices tends to increase (Hornsby and Kuratko 1990; 2003). Frontline managers are likely to experience this in terms of less control, more hurdles, or some combination of the two, which serves to increase the complexity of routine HR activities. In turn, this greater complexity in the HR function is likely to be a key contributor to the observed decreases in satisfaction, particularly as frontline managers are charged with being more involved with a wider variety of HR responsibilities as the firm grows.

This supports the importance of developing a strong culture which allows the firm to maintain many of the advantages of “smallness” even as it experiences growth (Schein 1992). The present results suggest that as firms grow they increasingly decentralize the administration of their HR practices into the hands of frontline managers without necessarily paying sufficient attention to how such greater involvement in HR practices changes the day-to-day responsibilities and relational interactions of these important organizational actors. Regrettably, the consequence appears to often be a decrease in supervisor satisfaction with various HR
functions. As such, an implication of the present research is that the good things about being small need to be driven deeper into a company’s culture as it grows.

From a practical standpoint, these results indicate that small business owners should be careful about the ways in which HRM is implemented in the organization as it grows. Certainly, there is an important role to be played by HR generalists and specialists within the firm, but these roles should not be developed in a functional silo. Rather, HR staff needs to work closely with frontline supervisors to ensure that best practices for selecting, developing, and rewarding talent are seamlessly embedded within the functional activities of frontline managers. The more tightly linked HR professionals are to frontline managers the more likely the firm will be able to benefit from the strategic human resource management ideas discussed above. As firms grow, top managers should make it a point to oversee this process to ensure that HR staff effectively and efficiently interacts with frontline managers when planning and implementing key HR practices.

Limitations and Future Research

While this research adds to the literature by assessing the specific role of frontline managers in the HR practices of small businesses, conclusions should be considered in light of the study’s limitations. First, as this was an exploratory study, data on all HR practices, as well as satisfaction with these practices, was collected from the same individual at one time. This may have resulted in common method bias and future research is needed to examine the amount of involvement and satisfaction with these HR practices at various levels of the organizational hierarchy (where available). In addition, longitudinal data, tracking small companies that grow over time, would also illuminate the evolving role of HR in small businesses.

Future research is also needed to shed light on the apparent paradox revealed in this study. Namely, as firms develop an official HR presence the satisfaction with these practices
tends to decrease. The tradeoff between frontline manager involvement in and satisfaction with HR practices demands further investigation. The data collected for this particular study do not allow us to make firm conclusions as to why satisfaction seemed to drop in this sample of firms, so future work is necessary to investigate these linkages in more depth and to specifically examine the connection between frontline manager involvement with HR and satisfaction. In addition, this work needs to be extended to include firm performance metrics, to assess the bottom line impact of supervisor participation in HRM.

**Conclusion**

Frontline managers represent an important organizational resource. This resource is particularly important in designing and implementing effective human resource management strategies. The results of this study suggest that frontline supervisor involvement with HR tends to increase as firm size increases, but that this increase leads to a decrease in the level of satisfaction with various HR practices. Study implications suggest that seamlessly integrating the HR function within the role of frontline supervisors may be a key criterion for the success of smaller firms as they begin to experience growth.
References


Table 1
HR Survey Results by Size Category

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<th></th>
<th>100 and under</th>
<th>101 to 500</th>
<th>over 500</th>
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<tr>
<td>Percent of Sample</td>
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<td>38.7</td>
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<tr>
<td>Percent of Respondents Role</td>
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<td>81.4</td>
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<td>Supervisor Involvement in Safety Administration</td>
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Table 1
HR Survey Results by Size Category (continued)

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<td>Planning</td>
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<td>Wage Administration</td>
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<td>Discipline</td>
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<td>% Types of Training Offered*</td>
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<td>In-house</td>
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<td>Seminars</td>
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<td>Internet</td>
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<tr>
<td>% Training in…*</td>
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<td>Safety</td>
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<tr>
<td>Discipline</td>
<td>41.7</td>
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* Of those who offer formal training
Table 2
Major Challenges Facing Frontline Managers

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Frequency</th>
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<td>Keeping up with and understanding laws and regulations</td>
<td>14</td>
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<tr>
<td>Employee relations/discipline</td>
<td>11</td>
</tr>
<tr>
<td>Consistency/fairness</td>
<td>8</td>
</tr>
<tr>
<td>Finding quality employees</td>
<td>8</td>
</tr>
<tr>
<td>Training: safety, equality, and efficiency</td>
<td>7</td>
</tr>
<tr>
<td>Evaluations, performance appraisals</td>
<td>6</td>
</tr>
<tr>
<td>Time management</td>
<td>6</td>
</tr>
<tr>
<td>Changing workforce, workplace</td>
<td>6</td>
</tr>
<tr>
<td>Coaching employees</td>
<td>5</td>
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<tr>
<td>Retention of employees</td>
<td>5</td>
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<tr>
<td>Managerial communication</td>
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</tr>
<tr>
<td>Assessing management/leadership</td>
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<tr>
<td>Productivity/efficiency</td>
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<tr>
<td>Save money on labor, health care, etc.</td>
<td>3</td>
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<tr>
<td>Strategic planning</td>
<td>3</td>
</tr>
<tr>
<td>Communication and confidentiality</td>
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<tr>
<td>Documentation</td>
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<tr>
<td>Employee motivation</td>
<td>3</td>
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<td>Outsourcing competition and high turnover</td>
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<tr>
<td>Placing people properly</td>
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<tr>
<td>Absenteeism</td>
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<tr>
<td>Opinion of HR</td>
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<td>Hiring and accommodating persons with various disabilities</td>
<td>1</td>
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<tr>
<td>Managing resources while traveling</td>
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<td>Compensation</td>
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<td>Hiring</td>
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<td>Conflict resolution</td>
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<td>Celebrate the successes of staff; don’t just focus on bad behavior</td>
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Entrepreneurship, Growth and the High Impact Firm: Comparing Indigenous and Foreign Firms

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Aim of the paper

As the global economic crisis deepens with the consequent negative effect of increasing levels of unemployment and falling aggregate demand, it is important to understand how, where and why entrepreneurial firms are able to turn the tide by creating prospects of growth. This paper is concerned with entrepreneurial and ‘high-impact firms’ by which we mean firms that generate ‘both’ disproportionate levels of employment and sales growth, and have high levels of innovative activity (Acs et al., 2008). It investigates differences in factors influencing high-impact growth between indigenous and foreign firms.

The contribution to the literature

This study makes several original contributions by identifying differences in factors affecting high impact growth between indigenous and foreign firms. Specifically, the findings are: 1) First, regional knowledge resources – particularly local human capital and business R&D; lie at the heart of high impact growth for indigenous firms but to a lesser degree, foreign firms; 2) Secondly, however, because low-tech industries have less need for knowledge resources, we find that indigenous firms have less growth advantages over foreign firms in low-tech industries compared to high-tech industries; 3) Thirdly, because foreign firms appear to have less access to regional resources, their growth appears to be relatively more dependent on large size and internationalisation. On the other hand, for indigenous firms, small firms had significantly higher growth rates than large firms and were more reliant on. Thus, the hypothesis that small firms grow faster than large firms was only supported for indigenous firms; 4) Due to greater familiarity with local environment, growth rates of indigenous forms was not found to rely much on international markets but home markets, while that of foreign firms appears to be significantly associated with international markets.

The methodology

The study is based on an analysis of data drawn from United Kingdom (UK) Innovation Scoreboard on 753 firms in 12 UK regions. Based on 1992 Standard Industrial Codes (SIC), identified by CCC (2004), the firms were further classified into those belonging to high-tech industries and low-tech industries. These thus provide a unique data set that allows for critical analysis of firms generating both employment and sales growth. The data was for the most part analysed using multiple regressions, bivariate correlations and t-tests.
The results and implications

These insights have potential implications for local and national policies on job creation, firm growth and the concentration of firms in specific spaces, especially under circumstances where many firms are shedding their work force as they struggle for survival in recessionary times.

1. Introduction

Interest in firm growth theory now spans about 30 years. The initial excitement centred on the work of Birch, where job providers, were seen to be the smaller, younger firms (Birch, 1979, 1987). Once firms grow older, their ability to generate new jobs decline substantially. Birch’s work has influenced a whole generation of researchers and generated significant contributions to knowledge making an impact on both research and public policy promoting small and medium enterprises (SMEs) in many countries (Storey, 1994; Landstrom, 1996; Acs et al., 2008). In the United Kingdom (UK) from 1987–88 alone, public expenditure on promoting enterprise was almost £200 million, supporting more than 106,000 unemployed people to start new businesses (Storey, 1994). Further, in 2004, the UK government launched the ‘encouraging a dynamic start-up market’ one of the key pillars of small business policy reflecting the interest on small firms and growth (Stel and Storey, 2004).

Today, scholars of firm growth argue that most job creation by small-firm occurs within a relatively small number of firms – called Gazelles (Birch and Medoff, 1994; Acs et al., 2008). In this setting, gazelles are firms that “move between small and large (size) quickly…(characterised by) great innovation and rapid job growth” (Birch and Medoff, 1994: p.163). Acs et al. (2008) extended the work of Birch beyond firms with mainly employment growth, by adding the revenue growth variable to that of expanding employment. Firms showing both revenue and employment growths were referred to as “high-impact firms” in order to distinguish them from gazelles (Acs et al., 2008). The major conclusion of the work by Acs et al. (2008) is that high-impact firms are relatively old, rare and contribute to the majority of overall economic growth.

This perspective on high impact firms (Acs et al., 2008) is particularly important at a time of global economic crisis. However, a critical review of the literature (see below), reveals that there is hardly any systematic study investigating a combination of region, sector specific or firm specific factors influencing high impact growth, and especially between indigenous and foreign firms. We believe that information about these factors could help with the formation of empirically informed policies for promoting high impact growth of firms that take into account the distinguishing features of indigenous and foreign firms (Nanchum and Keeble, 2003). Policies on local firm formation and growth and foreign firm investment can,
therefore be supported on the basis of empirical evidence. Firm managers may also benefit from a more clear understanding of regional, sectoral and firm specific factors that could hinder or promote high impact growth of the firms. Managers of such firms can, therefore, design effective strategies for high impact growth.

The central research problem addressed by in this paper is that of the differences in region, sector and firm specific factors influencing high impact growth of indigenous and foreign firms. The paper claims several contributions to knowledge. We construct a High-Impact Growth Index (HIGI), which measures firms’ ability to generate both sales and employment growth over a long time period. A second contribution is the identification of differences in role of regional human capital, regional business R&D and regional university in the growth of indigenous and foreign owned firms. Thirdly, this study identifies the differences in the relative growth rates of indigenous and foreign firms in both high-tech and low tech sectors. Fourthly, this study examines the differences in the influence of firm size and internationalisation in the growth of indigenous and foreign firms. Taken together these contributions augment the literature on gazelles and high impact firms (Birch, 1979, 1987; Gallagher et al. 1990; Daly et al. 1991; Birch and Medoff, 1994; Acs et al., 2008) regional factor theorists (Jaffe, 19989; Acs, 2002; Krudsen, 2007) and firm ownership – indigenous and foreign firms (Buckley and Casson, 1976; Caves, 1996; Nanchum and Keeble, 2003).

The paper begins with a review of the literature on gazelles and high impact firms (Birch and Medoff, 1994; Acs et al., 2008). This is then followed by a presentation of theoretical arguments on whether high impact firms on differences on regional factors (Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2003), sectoral factors (Audretsch, 1998; Doloreux, 2003) and firm specific factors (Hall, 1987; Nerlinger, 1999; Nanchum and Keeble, 2003) influencing the high impact growth of indigenous or foreign owned firms.

2. The Evolution of the High Impact Firm Theory

In the 1970s and 90s, firm growth theories on job creation consisted mainly of the work of the prominent economist, David Birch (1979; 1987). Various other researchers confirmed one of Birch’s key conclusions, namely that small firms account for most new job creation in an economy (Birch, 1979, 1987; Gallagher et al. 1990; Daly et al. 1991). In Birch’s seminal work, titled The Job Generation Process (1979), he developed an ‘economic micro-scope’ (Landstrom, 1996) that went beyond aggregate employment statistics so as to explain how the behaviour of individual firms leads to employment changes. Employing Dun & Bradstreet database in the United States (US), Birch initiated the systematic study of small businesses. Prior to his research only a few economists had studied small businesses in spite of their contribution to a large fraction of employment (Brock and Evans, 1989). Accordingly, Birch found that:
• In the US, about 60 percent of all jobs were created by firms employing fewer than 20 people; and almost 50 percent of the jobs were generated small by independent entrepreneurs. In contrast, large firms (employing more than 500 people) had less than 15 percent of all net new jobs.

• It was not all the small firms that were job generators. Rather, it was the smaller, younger firms that created jobs – and job generation abilities of firms declined once they were up to four years old.

Birch concluded that “whatever they are doing, however, large firms are no longer the major providers of new jobs for Americans” (Birch, 1981, p. 8). These seminal contributions have since then triggered a large canon of research, public policy measures and debate on the role played by small firms in employment creation (Gallagher et al. 1990; Daly et al. 1991; Acs et al., 2008). Researchers in other countries have long replicated Birch’s findings, with results of the UK (based on Dun & Bradstreet) indicating that small firms make a disproportionately large contribution to net job creation, although the contribution is not as high as estimated by Birch (Gallagher et al. 1990; Daly et al. 1991).

Gazelles

Birch’s work has also been subject to some criticism especially from Brown, Hamilton and Madoff (1990). In a book titled Employers Large and Small, they argued that:

Perhaps the most widespread misconception about small businesses in the United States is that they generate the vast majority of jobs and are therefore the key to economic growth. … Small employers do not create a particularly impressive share of jobs in the economy, especially when we focus on jobs that are not short lived (Brown, Hamilton and Madoff, 1990: p.1-2).

Subsequently, in early 1990s attempts at finding common ground between David Birch and James Madoff were made culminating in the emergence of another conceptual category of firms called ‘Gazelle’ . Gazelles were defined as firms with significant revenue growth (Birch and Madoff, 2004). It was argued that the difference between the role of small and large firms in creating jobs is of less significance. The firms that create most jobs are gazelles, which are not necessarily small or large. “These gazelles move between small and large quickly—at various times in either direction—and to classify them by their size is to miss their unique characteristics: great innovation and rapid job growth (Birch and Medoff, 1994: p. 163).

Since then, this perspective on gazelle has attracted attention from prominent entrepreneurship scholars (Parker, Storey and Witteloostuijn, 2005; Acs and Mueller, 2007). In 2005, Parker, Storey and Witteloostuijn (2005) take the study on gazelles further by developing a theory of dynamic management strategies of high-growth firms: gazelles. Based
on a data set from Britain containing information on over 100 gazelles they advance a framework that emphasises dynamic, rather than static, management strategies as key high growth (Parker, Storey and Witteloostuijn, 2005). Another recent paper by paper by Acs and Mueller (2007) found that business start-ups with less than 500 employees have persistent employment effects over time and across large, diversified metropolitan regions. Therefore, Acs and Mueller (2007) conclude that gazelles and characteristics of the region are important for employment growth. Another important point is that gazelles account for almost all the job creation in the economy (Birch and Medoff, 1994; Acs and Mueller, 2007).

From Gazelles to High Impact Firms

Zoltan Acs, William Parsons and Spencer Tracey in a report entitled ‘The High Impact Firm: Gazelles Revisited’ (2008) for the US Small Business Administration (SBA) extended the scope of Birch and Medoff’s (1994) findings. They argue that although Birch’s research is important, very little is known about what high impact firms are before they become high impact firms. To distinguish their research from that of Birch, they went beyond Birch’s definition of gazelles to include firms with significant revenue growth and expanding employment, referring to such firms as ‘high impact firms’ (Acs, et al., 2008). Based on a critical analysis of data set drawn from American Corporate Statistical Library (ACSL), which covers data from both public and private sector sources over a 12-year period, they found that:

High-impact firms are relatively old, rare and contribute to the majority of overall economic growth. On average, they are 25 years old, they represent between 2 and 3 percent of all firms, and they account for almost all of the private sector employment and revenue growth in the economy (Acs, et al., 2008).

Acs, et al.’s (2008) conclusions support Birch’s observation that gazelles account for almost all the job creation in the economy, although their measures were not entirely comparable. They also found comparable findings with regard to firm size, but not firm age. High impact firm are not new firms and they are found in all firm-size classes. High-impact firms are rare and contribute to the majority of overall economic growth (Birch and Medoff, 1994; Acs et al., 2008).

3. Research Issues

We argue that the research on the subject still remains unsatisfactory at least for three key reasons. First, existing theories on gazelles and high impact firms are important in helping us to understand which firms create jobs, and how they impact on the economy (Birch and Medoff, 1994; Acs et al., 2008). But these theories do not take into consideration the importance of region specific factors’ affecting high impact growth of indigenous and foreign
firms. By region specific factors, reference is being made to local human capital, business R&D and university R&D (Jaffe, 1989; Acs, 2002; Krudsen et al., 2007). This is of crucial importance especially in a time when economic policies are developed at the regional level (DTI, 1998; ERP, 2007). Such information will allow regional policy makers to understand the different roles local resources play in the growth of indigenous and foreign firms, thereby helping to design more informed policies specifically for indigenous and foreign firms. Secondly, it is not clear whether sector-specific factors have any impact on the growth of indigenous and foreign firms. These factors often refer to the extent to which high and low tech sectors rely on research and development (Butchart, 1987; Doloreux, 2003; CCC, 2004). At a time when many regional policies prioritise high-tech over low-tech sectors, it is important to understand whether such prioritisation should also apply to both indigenous and foreign firms. Thirdly, we appear to lack an understanding of the differences in the influence of varying ‘firm specific factors’ (such as ownership, firm size and internationalisation) for the high impact growth of indigenous and foreign firms. Such information could help both policy makers and managers of indigenous and foreign firms to understand whether the size of the firms offer greater advantages for firm growth, and also the extent to which their growth depends on international markets.

Table 1: Studies related to high impact firms and their weaknesses in relation to the research problem

<table>
<thead>
<tr>
<th>Author</th>
<th>Key Finding</th>
<th>Gap</th>
</tr>
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<tbody>
<tr>
<td>Birch (1979)</td>
<td>Small firms make disproportionate contribution to job generation in the US.</td>
<td>**</td>
</tr>
<tr>
<td>Birch (1989)</td>
<td>Small firms make disproportionate contribution to job generation in the US.</td>
<td>**</td>
</tr>
<tr>
<td>Gallagher et al. (1990)</td>
<td>Consistent pattern of small firms as net generators of jobs, and large firms as net losers in the UK</td>
<td>**</td>
</tr>
<tr>
<td>Brown, Hamilton and Medoff (1990)</td>
<td>Small employers do not create a particularly impressive share of jobs in the economy, especially when we focus on jobs that are not short lived</td>
<td>**</td>
</tr>
<tr>
<td>Daly et al. (1991)</td>
<td>In the UK, in job generation terms, although small firms are advantaged and have numerically dominant performance, it is important that large firm performance should not as a result be overlooked</td>
<td>**</td>
</tr>
<tr>
<td>Birch and Medoff (1994)</td>
<td>Gazelles account for almost all the job creation in the economy</td>
<td>**</td>
</tr>
<tr>
<td>Parker, Storey and Witteloostuijn (2005)</td>
<td>Conclude that dynamic, rather than static, management strategies are key to high-growth</td>
<td>**</td>
</tr>
<tr>
<td>Acs and Mueller (2007)</td>
<td>Gazelles and characteristics of the region are important for employment growth</td>
<td>**</td>
</tr>
<tr>
<td>Acs et al. (2008)</td>
<td>High-impact firms are relatively old, rare and contribute to the majority of overall economic growth</td>
<td>**</td>
</tr>
</tbody>
</table>

**Hardly compare differences between indigenous and foreign firms in terms of region specific, sector specific and firm specific factors influencing their high impact growth.

We contend that differences in factors influencing high impact growth between indigenous and foreign owned firms remain by and large obscure (see table 1). Identification of these differences provides the basis for generating new propositions related to the research problem and the development of a conceptual framework.
4. CONCEPTUAL FRAMEWORK AND PROPOSITIONS

The literature on localised knowledge spillovers sheds light on regional differences in resources that may affect the growth of indigenous and foreign firms. A review of this literature enables us to compare indigenous and foreign owned firms in terms region specific factors (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). The literature on high-tech and low-tech industries (Mahmood, 1992; Doloreux, 2003) allows us to find the theoretical basis for proposing that patterns of high impact growth by indigenous and foreign high impact firms may differ across sectors. Figure 1 below presents our conceptual framework for comparing indigenous and foreign firms in terms of differences in the three factors influencing their high impact growth. The region specific factors are local human capital, business R&D and university R&D (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). The sector specific factors relate to the nature of technology developed by firms – high-tech and low tech sectors (Doloreux, 2003). Finally, the firm specific factors are: firm size (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999) and internationalisation (ECLAC, 1985; Wilmore, 1986; Falvey et al., 2007).

**Figure 1: Framework for Comparing Factors Influencing High Impact Growth by Indigenous and Foreign Firms**

<table>
<thead>
<tr>
<th>Indigenous Firms</th>
<th>Foreign Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Factors</strong></td>
<td><strong>Regional Factors</strong></td>
</tr>
<tr>
<td>- Human Capital</td>
<td>- Human Capital</td>
</tr>
<tr>
<td>- Business R&amp;D</td>
<td>- Business R&amp;D</td>
</tr>
<tr>
<td>- University R&amp;D</td>
<td>- University R&amp;D</td>
</tr>
<tr>
<td><strong>Sectoral Factors</strong></td>
<td><strong>Sectoral Factors</strong></td>
</tr>
<tr>
<td>- High-tech sectors</td>
<td>- High-tech sectors</td>
</tr>
<tr>
<td>- Low-tech sectors</td>
<td>- Low-tech sectors</td>
</tr>
<tr>
<td><strong>Firm Specific Factors</strong></td>
<td><strong>Firm Specific Factors</strong></td>
</tr>
<tr>
<td>- Firm size</td>
<td>- Firm size</td>
</tr>
<tr>
<td>- Internationalisation</td>
<td>- Internationalisation</td>
</tr>
</tbody>
</table>

This model integrates high impact firm literature (Acs et al., 2008), localised knowledge spillover theory (Acs, 2002; Stuart and Sorenson, 2003) and international business theory (Nanchum and Keeble, 2003). The aim is thus to empirically examine the effect of various factors on high impact growth (Acs, et al. 2008) by indigenous and foreign firms.
What follows is a discussion of each component of the model so as to develop specific propositions on differences in the effect of the three factors on the growth of indigenous and foreign firms.

4.1 Region Specific Factors

The knowledge spillover theory mainly highlights the significance of local linkages for a firm’s generation of its own knowledge (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003). Localised knowledge spillovers are defined as “knowledge externalities bounded in space”, which allow firms operating in proximity to key knowledge sources to introduce innovations at a faster rate than rival firms located elsewhere (Breschi and Lissoni, 2001). Knowledge takes the form of local human capital, business R&D and government R&D (Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). According to Breschi and Lissoni, 2001, localised knowledge spillovers can be broken down into three logical chains (Breschi and Lissoni, 2001: p.258):

a. knowledge generated within innovative firms and/or universities is somehow transmitted to other firms;

b. knowledge that spills over is a public good, i.e., available to those wishing to invest for searching it out, and may be exploited by more than a few users at the same time;

c. Despite b., knowledge that spills over is mainly “tacit”, i.e., highly contextual and difficult to codify, and therefore is more easily transmitted through face-to-face contacts and personal relationships, which require spatial proximity; in other words, it is a public good, but a local one.

The key question here is the extent to which local knowledge is significant for high impact growth of both indigenous firms and foreign firms assuming they are located in the same region. Following the argument of localised knowledge spillover theorists, local entrepreneurs and managers are likely to have greater connections to technologists, universities and other local sources of knowledge since they are more likely to have close social connections (Stuart and Sorenson, 2003). However, foreign firms are also attracted to regions with key knowledge inputs in order to gain access to its specialised resources (Dunning, 1993; Nanchum and Keeble, 2003). International business theory suggests that gaining access to immobile resources (such as technologies and organisational capabilities) available in foreign countries is an important rationale for firms to invest outside their home country (Dunning, 1993; Wesson, 1997; Kuemmerle, 1998). Foreign firms attracted by regions with resources can become insiders, and some of their needs can be met locally, in a manner similar to indigenous members of a local agglomeration or cluster (Nanchum and Keeble, 2003).
Paradoxically, foreign firms with their linkages with the rest of the transnational corporation (TNC) (Nanchum and Keeble, 2003) may have limited need for accessing local resources during the growth process. Greater cost disadvantages for foreign firms arising from unfamiliarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Nanchum and Keeble, 2003) suggest that local (indigenous) firms will benefit more from local resources due to more established social connections (Stuart and Sorenson, 2003). These observations lead to the proposition that regional knowledge resources are critical for high impact growth, especially for local firms.

**P1:** Regional knowledge resources lie at the heart of high impact growth for indigenous firms but to a lesser degree, foreign firms.

### 4.2 Sector Specific Factors

Since indigenous firms have higher levels of access to regional knowledge resources compared to foreign firms, we argue that such growth advantages are more likely to be in high-technology sectors rather than low technology sectors. This is because although in high-technology sectors, firms have a high level of requirement for external knowledge resources (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003), firms in low-technology sectors have less need for knowledge resources (Dolororeux, 2003). Therefore, the advantage of accessing knowledge resources that indigenous firms have in high-technology industries compared to foreign firms may be less important for their low-technology counterparts. Moreover, indigenous and foreign firms in low technology industries are likely to have less reliance on local knowledge resources. By way of contrast since foreign firms are often established by large multinationals, which often supply them with key resources (Nanchum and Keeble, 2003), we cannot expect indigenous firms to have higher growth rates than foreign firms in low-tech sectors.

**P2:** Indigenous firms are less likely to have higher growth advantages over foreign firms in low-tech industries (which require less knowledge resources) compared to high-tech industries.

### 4.3 Firm Specific Factors

**Firm Size**

One key finding on firm growth is that of the negative correlation between the growth rate of firms and their size. This finding suggests that small firms grow faster than large firms (Evans, 1987a,b; Hall, 1987; Nerlinger, 1999). This finding appears to support Birch’s contention that small firms create the majority of jobs in an economy (Birch, 1979, 1989). However, the picture becomes less clear when firms are divided into indigenous and foreign firms.
We argue that smallness of size is less likely to be associated with the growth for foreign firms. Small foreign owned firms incur higher setting up and transaction costs in a host country compared to indigenous firms due to the unfamiliarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Kinoshita, 1998; Nanchum and Keeble, 2003) and greater lack of local social connections (Stuart and Sorenson, 2003). These disadvantages can however often be offset by their firm-specific advantages (Kinoshita, 1998; Nanchum and Keeble, 2003). Foreign firms incur sunk costs at the initial stage; thus large firms are considered to have better access to capital in comparison to small firms to off-set such costs (Horst, 1972; Kinoshita, 1998). Many researchers have concluded that large foreign firms have more advantages investing abroad compared to small firms (Horst, 1972; Lall, 1986; Blomstrom and Lipsey, 1986). Horst’s (1972) seminal work on foreign direct investment (FDI) from U.S. to Canada suggests that size is the key explanatory attribute of the positive coefficient that explains investment. Firm size was also found to be significant for foreign investment in a study on Indian firms by Lall (1986). More recently, some researchers on Japanese firms have found that if destinations go beyond Asia, firm size plays a significant role in Japanese investments (Horaguchi, 1992; Trevino and Daniels, 1994). This discussion leads us to the third proposition:

**P3: While small, indigenous firms tend to grow faster than large firms, small foreign firms will not grow significantly faster than large firms.**

**Firm Internationalisation**

Another important reason for expecting differences in factors influencing high impact growth between indigenous and foreign firms is the role of internationalisation. Researchers of international business have compared indigenous and foreign firms on a range of international related activities (ECLAC, 1985; Wilmore, 1986; Falvey et al., 2007) although not in terms of high impact growth. The results appear to suggest that foreign firms have advantages in terms of internationalisation in comparison to indigenous firms. Findings from these studies have shown that the possibility of exporting for a foreign firm doubles or even triples that of an indigenous firm (ECLAC, 1985). Other studies suggest that the costs of exporting are much lower for foreign firms, because they have more access to information on markets and sales organizations abroad (Wilmore, 1986; Buckley, 2001). The extent of internationalisation has positive effects on foreign firms. Falvey et al. (2007) argue that larger market size leads to higher survival probability for foreign-owned firms, but reduces the survival probability of indigenous firms.

When it comes to home markets, indigenous firms have comparatively more advantage because of their knowledge of local markets (Mirza, 1986; Casson, 1997; Mariotti and Piscitello, 1995). Hence, although indigenous firms may be able to benefit more from home markets, they may not be able to participate in international activities to the same extent.
as their foreign counterparts. This implies greater advantages in international activities for foreign firms but more advantages for indigenous firms in home markets.

**P4:** Greater familiarity with local environment and greater access to local resources, restricts growth rates of indigenous firms to local markets, while foreign firms are more likely to be significantly associated with international markets.

These four propositions provide the basis for our investigation into high impact foreign and local firms.

5. Data and Methods

Data and Geographic Level of Analysis

The key database used in this study is the 2008 UK R&D Scoreboard, which is an international league table of the companies investing most in R&D. The report presents the latest data on investment in R&D and financial performance of the 850 most active UK owned and foreign companies operating in UK. With a focus on innovative high growth firms, the R&D Scoreboard provides reasonably rich data for testing some of the theoretical propositions developed above. The data has a geographic aggregation level of regional development authorities (RDAs) in UK, making regional analysis of such data more appropriate for economic policy, especially because the RDA level in the UK is where regional economic strategies are developed (Lambert, 2003; Adams and Smith, 2004). The data is analysed using bi-variate correlations, ordinary least square (OLS) regressions, as commonly employed in entrepreneurship and innovation studies (Jaffe, 1989; Acs, 2002; Abubakar and Mitra, 2007; Abubakar and Mitra, 2009; Abubakar, 2009).

Variables and Measurements

The R&D Scoreboard firms were thus sampled based on the following criteria: 1) firms must have 4 year employment growth data available; 2) firms with 4 year sales growth data available; 3) located with UK RDAs. This yielded a total of number of 753 firms. Below, we provide a definition of variables and their sources:

- **High Impact Growth** - The high impact firm definition was operationalised as firms with both sales and employment growth over a 4 year period (Acs et al., 2008). We develop a new index termed “High Impact Growth Index (HIGI)” which measures the extent to which a firm achieves both positive employment and sales growth over a 4 year period. The index has a Cronbach’s alpha score of 0.5, which indicates reasonable level of reliability as used in other entrepreneurship studies (Manimala, 1999);

- **Ownership** – the R&D Scoreboard data classifies firms as UK owned (referred to here as ‘indigenous’) and foreign owned, or ‘foreign firms’;
- **Firm Size**: this was measured in terms of number of employees employed by firms, as this is the measure commonly used in many growth studies (Birch, 1979, 1989; Wagner, 1995).

- **Internationalisation** – is used to describe the outward movement or increasing involvement of a firm or larger grouping’s international operations (Johanson and Vahlne, 1977; Welch and Luostarinen, 1988). We measure internationalisation as the percentage of sales outside home region (Hejazi and Santor, 2005).

- **Regional human capital**: human capital at the regional level is defined as percentage of population with up to National Vocational Qualification (NVQ) 4+ as commonly used in entrepreneurship studies (Mitra and Gleave, 2007; Abubakar and Mitra, 2007; Lee et al., 2004). This variable is employed as many studies have shown that educational attainment is associated with entrepreneurship and innovation (Mitra and Gleave, 2007; Abubakar and Mitra, 2007; Lee et al., 2004).

- **Regional R&D** – We measure R&D at the regional level using R&D expenditure as generally used in entrepreneurship and innovation studies (Jaffe, 1989; Acs, 2002; Abubakar and Mitra, 2007; Abubakar and Mitra, 2009).

- **Other variables** – Almost all the other variables are taken directly from the R&D Scoreboard data (see the 2008 UK R&D Scoreboard for more information).

Figure 2 below shows the correlation between the high impact growth index and R&D growth. For both indigenous and foreign firms, high impact growth appears to be significantly correlated with increased R&D activities suggesting that high impact growth appears to associated with R&D and entrepreneurial activities in terms of introducing new products and services (Abubakar, 2009; Abubakar and Mitra, 2009).

**Figure 2: Correlation between High Impact Growth Index (4 yrs) and R&D growth (4yrs)**

![Graph showing correlation between high impact growth index and R&D growth for indigenous and foreign firms](image-url)
Appendix 1 presents the descriptive statistics that show a comparison between indigenous and foreign firms on a range of variables related to firm growth, R&D, sales, employment and financial information. In general, the data suggests that indigenous firms have significant higher performance in comparison to foreign firms.

5. FINDINGS AND DISCUSSION

5.1. Regional Factors

In this section we examine the proposition developed earlier that region specific resources are relatively more important for generating indigenous high impact firms compared to foreign owned high impact firms, although they are significant for both groups. Figure 3 shows the geographic concentration of high impact firms per 10,000 population i.e. firms that have generated both positive growth in sales and employment. The map shows variations in high impact firms on a per-capita basis at the regional level. It ranges from 3.7 firms per capita (Yorkshire and Humber) to 30 (London). The highest number of indigenous high impact firms in London (25.1), South East (18.1) and Eastern region (15.8), which rank 1st, 2nd and 3rd respectively. Similarly, the regions with the highest numbers of foreign high impact firms per capita are the South East (9.9), Eastern (5.4) and London (4.9). These suggest that most high impact firms in the UK are geographically concentrated around London, South East and Eastern regions (an explanation of these regional variations in the geography of high impact firms is provided later).

Figure 3: Geographic distribution of high impact firms
1) East  (2) East Midlands  (3) London  
4) North East  (5) North West  (6) South East  
7) South West  (8) West Midlands  (9) Yorkshire and Humber

Note: This map depicts only firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Table 3 shows summary data on human capital and R&D for each of the UK regions. The table suggests a high level of disparity across regions in terms of human capital, business R&D, higher education institution (HEI) R&D and government R&D. Our primary interest here is thus the extent to which these regional resources are associated with indigenous and foreign high impact firms.

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<tbody>
<tr>
<td>Eastern</td>
<td>14.4</td>
<td>4350</td>
<td>580</td>
<td>366</td>
</tr>
<tr>
<td>London</td>
<td>25</td>
<td>1093</td>
<td>1559</td>
<td>299</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>12.8</td>
<td>177</td>
<td>139</td>
<td>19</td>
</tr>
<tr>
<td>Scotland</td>
<td>14.1</td>
<td>513</td>
<td>870</td>
<td>327</td>
</tr>
<tr>
<td>South West</td>
<td>15.5</td>
<td>1262</td>
<td>300</td>
<td>296</td>
</tr>
<tr>
<td>West Midlands</td>
<td>11.9</td>
<td>975</td>
<td>322</td>
<td>23</td>
</tr>
<tr>
<td>East Midlands</td>
<td>12.6</td>
<td>1053</td>
<td>307</td>
<td>90</td>
</tr>
<tr>
<td>North East</td>
<td>10.4</td>
<td>310</td>
<td>222</td>
<td>1</td>
</tr>
<tr>
<td>North West</td>
<td>12.9</td>
<td>2150</td>
<td>560</td>
<td>92</td>
</tr>
<tr>
<td>South East</td>
<td>17.8</td>
<td>3582</td>
<td>912</td>
<td>631</td>
</tr>
<tr>
<td>Wales</td>
<td>12.3</td>
<td>227</td>
<td>254</td>
<td>44</td>
</tr>
<tr>
<td>Yorkshire &amp; Humber</td>
<td>12.2</td>
<td>417</td>
<td>493</td>
<td>49</td>
</tr>
</tbody>
</table>

Note: This table depicts only firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Sources: DTI (2001); Business Enterprise Research and Development Scotland (2007)

Next, we examine the relative impact of these regional resources on number of high impact firms per capita. Since in this analysis, we are only interested in high impact firms, only firms with both positive employment and sales growth over a four year period were selected. Accordingly, the analysis is conducted across the twelve UK regional development authority (RDA) regions. We use the regional population measure to control for varying sizes of regions (Lee et al., 2004). The number of high impact firms is reported on per capita basis.

Table 4 reports the results of the regression analysis. Consistent with our proposition, it appears that region specific resources are more associated with indigenous high impact firms (0.94) in comparison to foreign high impact firms (0.71), although both are highly significant at p≤0.01. Thus, indigenous firms appear to derive higher benefits from local knowledge resources in comparison to foreign firms. However, it appears that knowledge generated in another country can be accessed and has a significant impact on the growth of foreign firms, which is in contrast to arguments of some scholars who argue that spillovers are highly localised (Audretsch, 1998;
Stuart and Sorenson, 2003). It seems that foreign firms even in the UK are particularly attracted to regions with high levels of local resources. This finding is similar to that of Abubakar and Mitra (2009) who reported significant correlations between international knowledge sources and innovative activities of small firms.

**Table 3: Region specific resources and number of high impact firms per capita at UK regional level**

<table>
<thead>
<tr>
<th></th>
<th>High impact firms per capita</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indigenous</td>
<td>Foreign</td>
</tr>
<tr>
<td>Human capital</td>
<td>0.945***</td>
<td>0.592</td>
</tr>
<tr>
<td>Business R&amp;D</td>
<td>0.362***</td>
<td>0.294</td>
</tr>
<tr>
<td>HEI R&amp;D</td>
<td>-0.129</td>
<td>-0.492</td>
</tr>
<tr>
<td>Government R&amp;D</td>
<td>-0.014</td>
<td>0.578*</td>
</tr>
<tr>
<td>R Square</td>
<td>.940***</td>
<td>.710***</td>
</tr>
</tbody>
</table>

Note: *p<0.1; ** p<0.05; *** p<0.01
N=12

Note: This analysis is conducted only on firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Another important finding emerging from the regression results is that while human capital and business R&D appear have positive effects on the number of high impact firms across the UK regions (both indigenous and foreign) once the effect of all other factors are controlled (business R&D and human capital) university R&D appears to be insignificant for both groups of firms. This finding implies without strong local business R&D and local human capital, university R&D plays an insignificant role for firm growth. Thus, it seems although university R&D is highly important for the creation of innovative start-ups (Saxenian, 1994; Abubakar and Mitra, 2007), it plays less significant role for firm growth, except where the region has a reasonably good pool of human capital and business R&D. When the effect of business R&D and human capital are not removed, we observe positive correlations for both indigenous (correlation=0.80) and foreign firm (correlation =0.47) between firm growth and university R&D across the regions. However, once effect of business R&D and human capital are controlled the partial correlations become negative and insignificant for both indigenous (correlation = -0.12) and foreign firms (correlation = -0.49). Hence, it seems that regional business R&D and human capital mediate the effect of university R&D on firm growth.

In brief, the results of the analysis appear to support our first proposition. The different results for indigenous and foreign firms clearly demonstrate the need to take into account varying effects of local resources for firm growth by the two groups of firms.

**5.2. Sectoral Factors**

Since foreign firms have lower levels of access to local knowledge resources compared to indigenous firms, such growth disadvantages are more likely to be found in high technology sectors. We test the proposition that while indigenous firms may have significantly higher growth advantages in high-tech sectors due to greater access to regional
knowledge resources, (which require less knowledge resources), no significant differences are likely to exist in the growth rates of indigenous and foreign firms in low technology industries.

We first classify sectors into high-tech and low-tech industries (Butchart, 1987; CCC, 2004). High-tech industry definition was originally developed by Butchart (1987) based on selected industries from 1980 Standard Industrial Classification (SIC). This provided a definition of high-tech industries based on the ratios of a) R&D expenses to sales and b) employees working in R&D to total employees. In 2004, Butchart’s (1987) original 1980 SIC code classification of high-tech sectors, was built upon by the authoritative Cambridgeshire County Council (CCC, 2004), which identified high-tech sectors through the modernised 1992 SIC codes. This definition has been employed in a number of entrepreneurship and innovation studies (Keeble *et al.*, 1999; Athreye, 2001; Abubakar, 2009). We also considered sectors in the R&D scoreboard data that relate closely to CCC (2004) high-tech sectors as high-tech industries; while all the other sectors were considered as low tech industries.

Table 5 below gives descriptive statistics on growth and R&D investment measures between the high-tech industries and low-tech industries identified. In general, in line with Butchart’s (1987) definition, the high-tech sectors appear to higher scores for various R&D indicators.

Table 4: R&D investment (2007/8)

<table>
<thead>
<tr>
<th>Industry</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D (Millions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>594</td>
<td>28.7273</td>
<td>181.46227</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>159</td>
<td>24.8598</td>
<td>74.09179</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Sales</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>587</td>
<td>548.5070</td>
<td>9916.83751</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>158</td>
<td>5.4076</td>
<td>30.39804</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Operating Profit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>390</td>
<td>383.6369</td>
<td>2572.60153</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>142</td>
<td>73.8246</td>
<td>347.89680</td>
</tr>
</tbody>
</table>

**High-tech sectors:**
- Pharmaceuticals & biotechnology, Health care equipment & services, Electronic & electrical equipment, Technology hardware & equipment, Software & computer services, Leisure goods, Automobiles & parts, Industrial engineering, Electricity, Chemicals, Aerospace & defence, Fixed line telecommunications, Oil equipment, Services & distribution, Mobile telecommunications, General industrials, Industrial transportation, Industrial metals, Oil & gas producers etc.

**Low-tech sectors:**
- Beverages, Media, Personal goods, Food producers, Support services, Construction & materials, Travel & leisure, Financial services, Household goods, General retailers, Forestry & paper, Nonlife insurance, Mining, Life insurance etc.

In order to test our second proposition, the high impact growth index (HIGI) discussed in the methodology section is used as the proxy for high impact growth. We use a t-test to examine whether growth rates of indigenous and foreign firms in high-tech industries but not low tech industries. Accordingly, figure 4 below depicts the t-test results. The results appear to support our contention that indigenous firms have less growth advantages than

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2 See section on data methods for more details
foreign firms in low-tech industries. A relatively smaller difference in the mean figures was observed for low-tech industries compared to high-tech industries.

**Figure 4: Differences in High Impact Growth Index between indigenous and foreign firms in high-tech and low-tech industries**

Although a number of studies suggest that indigenous firms have more advantages compared to foreign firms due to greater familiarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Kinoshita, 1998; Nanchum and Keeble, 2003), our finding suggest that it is important to acknowledge that such performance differences are more likely to exist in high-tech industries rather than low-tech industries. Low-tech industries have less need for knowledge resources compared to high-tech industries (Audretsch, 1998). Even if foreign firms are more likely to lack social connections to providers of knowledge resources, this disadvantage becomes less important in industries that require lower levels of technical know-how. Having found some differences in the importance of sector related factors for the growth of firms in the two groups, what roles do firm-specific factors such as firm size - play in the growth of indigenous and foreign firms.

**5.3. Firm Specific Factors: Size and Internationalisation**

We examine our third proposition, which states that: while for indigenous small firms tend to grow faster than large firms, small foreign firms will not grow significantly faster than their larger counterparts. In statistical terms, this suggests that while for indigenous firms, the High Impact Growth Index will be significantly higher for small firms compared to large firms; for foreign firms, no significant difference will be found between small and large firms.

We begin by classifying firms into small and medium enterprises (SMEs) and large firms. We use the American definition of firms having less than 500 employees so as to be in line with existing literature on gazelles and high impact firms (Birch, 1979, 1989; Birch and Madoff, 1994; Acs et al., 2008). First, we carry-out a simple bi-variate correlation between firm size and growth for indigenous firms separately and then foreign firms separately. For
indigenous firms, we find firm size to be negative and significantly correlated with high impact growth ($p \leq 0.1$). This appears to be in line with the argument that small firms grow faster than large firms (Evans, 1987a and b; Hall, 1987; Nerlinger, 1999). In contrast, however, we do not find any significant negative correlation between firm size and growth for foreign firms. It appears that small size may not be a significant factor in influencing the high impact growth of foreign firms.

Table 5: Correlation between firm size and high impact growth

<table>
<thead>
<tr>
<th></th>
<th>Indigenous Firms</th>
<th>Foreign Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Impact Growth</td>
<td>-.083*</td>
<td>-.007</td>
</tr>
</tbody>
</table>

Indigenous firms (N=469); Foreign firms (N=284);
Note: *$p \leq 0.1$; **$p \leq 0.05$; ***$p \leq 0.01$

Next, we conduct t-tests separately for indigenous and foreign firms in order to determine differences in the High Impact Growth Index of SMEs and large firms. Table 6 below displays the results of the t-test. Consistent with the results found earlier (see table 5); we find that for indigenous firms, SMEs are significantly more likely to experience high impact growth ($p \leq 0.05$) compared to large firms. As far as foreign firms are concerned we find no statistically significant difference between the growth of SMEs and large firms ($p \geq 0.1$).

Figure 5: High Impact Growth Index: comparing SMEs and large firms

Table 6: Differences between SMEs and large firms in High Impact Growth

<table>
<thead>
<tr>
<th></th>
<th>Size Classification</th>
<th>N</th>
<th>Mean</th>
<th>t-test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Firms</td>
<td>SMEs</td>
<td>220</td>
<td>.2259186</td>
<td>0.05**</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>249</td>
<td>.0118657</td>
<td></td>
</tr>
<tr>
<td>Foreign Firms</td>
<td>SMEs</td>
<td>115</td>
<td>-.1554055</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>169</td>
<td>-.2058285</td>
<td></td>
</tr>
</tbody>
</table>

Note: *$p \leq 0.1$; **$p \leq 0.05$; ***$p \leq 0.01$

Our findings suggest the need for a distinction between indigenous and foreign firms when observing that small firms grow faster than large firms (Evans, 1987a and b; Hall, 1987; Nerlinger, 1999). These findings confirm our proposition that small foreign firms are unlikely
to grow faster than large firms. This as mentioned earlier is due to disadvantages faced by foreign firms compared to indigenous firms because of costs arising from unfamiliarity with the environment. These disadvantages can be offset by their firm-specific advantages such as their large size (Horst, 1972; Kinoshita, 1998). Size plays different roles in the drama of high impact growth of foreign and indigenous firms.

We also expect more firm-specific differences in factors influencing the growth of indigenous and foreign firms, especially in terms of the internationalisation process. We proposed that due to greater familiarity with the local environment and greater access to local resources, the growth rates of indigenous forms is less likely to occur in international markets. This proposition contrasts with the view that foreign firms are more likely to be significantly associated with international markets. To test our fourth proposition, we adopt a measure of internationalisation, which is measured as the percentage of sales outside home region (Hejazi and Santor, 2005).

Figure 6 below shows the simple bi-variate correlation between the High Impact Index and proportion of sales outside home region for indigenous and foreign firms. The results suggest that while the growth rate of foreign firms is significantly correlated with proportion of sales outside home region (p<0.01), the growth rate of indigenous firms does not appear to be significantly correlated with proportion of sales out home region (p>0.1).

Figure 6: Correlation between High Impact Index and Proportion of sales outside home region

![Correlation plots](image-url)
It appears that although indigenous firms have higher growth rates, a large proportion of their sales occur within home markets. The role of home market for firm growth appears to be particularly important for indigenous firms. In contrast, the growth of foreign firms appears to be more dependent on the extent of sales beyond home markets. Therefore the role that internationalisation plays for firm growth may need to be distinguished, depending on whether firms are foreign and indigenous owned. This does not mean that internationalisation is not important for indigenous firms, rather, their growth relies less on international markets. This is likely because indigenous firms have less access to information on markets and sales organizations abroad (Wilmore, 1986; Buckley, 2001).

6. Conclusion

Recent theories of firm growth view small firms as the primary engine of employment generation and growth (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999). While firm related characteristics such as small size are considered important for firm growth, it remains unclear whether differences exist in factors influencing the growth of indigenous and foreign firms – especially in both employment and revenue (high impact growth). This study examined differences in the influence of specific, sector and region specific factors influencing high impact growth. Using data on 753 firms, 35 sectors classified into high-tech and low tech industries and 12 regions of the UK, we made several original findings.

6.1. Original Findings

First, regional knowledge resources – particularly local human capital and business R&D; lie at the heart of high impact growth for indigenous firms but to a lesser degree for foreign firms; Regional resources play a more crucial role in the high impact growth of indigenous firms compared to local firms even when they are both located in the same region. Second, because low-tech industries have less need for knowledge resources, we find that indigenous firms have less growth advantages over foreign firms in low-tech industries in comparison to high-tech industries. Therefore, although foreign firms can be more unfamiliar with the local environment and have less social connections to providers of local knowledge resources (Nanchum and Keeble, 2003; Stuart and Sorenson, 2003), this disadvantage becomes less important for firm growth in industries that require less knowledge i.e. low tech industries.

Thirdly, also, because foreign firms appear to have less access to regional resources, their growth appears to be relatively more dependent on large firm size. In contrast, for indigenous firms, small firms have significantly higher growth rates than large firms. The finding that small firms grow faster than large firms (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999) was only supported for indigenous firms. This carries an implication
for job generation by foreign firms; small foreign firm may not generate more jobs than their larger counterpart.

Fourthly, due to greater familiarity with local environment, growth rates of indigenous forms was not found to rely much on international markets but home markets, while that of foreign firms appears to be significantly associated with international markets. Therefore the significance of the home market for firm growth may have been underestimated by the excessive focus on firm internationalisation especially because indigenous firms were found to have faster growth rates. Thus, this study is likely the first attempt towards identifying differences in factors affecting high impact growth between indigenous and foreign firms. Below, we report some refutation findings.

6.2. Refutational Findings

In contrast to the expectations of researchers on university spillovers (Jaffe, 1989; Audretsch, 1998; Stuart and Sorenson, 2003), once regional business R&D and human capital are controlled, we find no evidence that firm growth rates across UK regions between 2004-2008 are positively impacted by university R&D. When the effects of regional business R&D and human capital are not controlled, university R&D becomes positively associated with firm growth for both indigenous and foreign firms. Even though university R&D plays crucial role in region’s ability to generate innovative start-ups (Abubakar and Mitra, 2007), it seems a region may only benefit from university R&D in terms of firm growth if the business R&D in the region is strong and there is sufficient human capital in the region to ‘absorb’ the research outputs. Regional human capital and business R&D mediate the effect of university research, and therefore without them, university R&D may not be significant for firm growth.

6.3. Implications for Policy

In encouraging high impact growth by indigenous and foreign firms policy makers should take into account specific differences in the regional, sectoral and firm specific factors influencing growth as indicated above. A blanket strategy may not be very effective in fostering the growth of indigenous and foreign firms. If regional policy makers wish to encourage the use of university R&D for firm growth, it is important for them to contextualise their value by ensuring that there are sufficient levels of business R&D and human capital complements and absorbs these assets. Fostering commercialisation of university R&D should be done in association with encouragement of both human capital and business R&D.

6.4. Limitations

Researchers are often criticised for not making clear the environments to which their theories apply. The present analysis is concerned only with firms that have significant R&D activities, especially since the sample was drawn from R&D Scoreboard data. Therefore, the
results of the analysis on indigenous firms are applicable only to indigenous firms that engage in R&D; while the findings on foreign firms are mainly applicable foreign firms that conduct R&D. Also, this study is limited to firm growth in employment and sales; it does not consider other growth and firm performance measures. Any attempt to apply the findings of this research in other regions must take into account the contexts within which the research was conducted.

References


Appendix 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Ownership</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-tests (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Size</td>
<td>Indigenous</td>
<td>469</td>
<td>10550.6482</td>
<td>40661.5821</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>284</td>
<td>2275.7852</td>
<td>4211.8645</td>
</tr>
<tr>
<td>High Impact Growth Index (HIGI)</td>
<td>Indigenous</td>
<td>469</td>
<td>0.1122743</td>
<td>1.21190599</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>284</td>
<td>-1.854107</td>
<td>.41596139</td>
</tr>
<tr>
<td>Employment Growth 4yrs</td>
<td>Indigenous</td>
<td>469</td>
<td>36.4499</td>
<td>135.04415</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>284</td>
<td>-2.7641</td>
<td>33.58693</td>
</tr>
<tr>
<td>Sales Growth 4yrs</td>
<td>Indigenous</td>
<td>469</td>
<td>86.4307</td>
<td>392.80324</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>284</td>
<td>26.9789</td>
<td>199.69650</td>
</tr>
<tr>
<td>Sales ( Millions)</td>
<td>Indigenous</td>
<td>454</td>
<td>2333.3304</td>
<td>11776.03481</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>282</td>
<td>709.6915</td>
<td>1558.29371</td>
</tr>
<tr>
<td>R&amp;D ( Millions)</td>
<td>Indigenous</td>
<td>469</td>
<td>33.6297</td>
<td>205.69496</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>284</td>
<td>18.4661</td>
<td>44.24149</td>
</tr>
<tr>
<td>R&amp;D Growth 4yrs</td>
<td>Indigenous</td>
<td>431</td>
<td>82.4362</td>
<td>286.21544</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>265</td>
<td>29.2189</td>
<td>110.19369</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Operating Profit</td>
<td>Indigenous</td>
<td>323</td>
<td>128.0731</td>
<td>337.38886</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>209</td>
<td>568.1048</td>
<td>3494.73776</td>
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<tr>
<td></td>
<td>Indigenous</td>
<td>Foreign</td>
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<td>Foreign</td>
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<td>------------------------------</td>
<td>------------</td>
<td>---------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Sales</td>
<td>464</td>
<td>281</td>
<td>667.2534</td>
<td>47.0548</td>
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<tr>
<td>R&amp;D investment plus cap ex</td>
<td>464</td>
<td>281</td>
<td>684.7056</td>
<td>54.9242</td>
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<tr>
<td>Operating Profit (Millions)</td>
<td>436</td>
<td>264</td>
<td>373.2683</td>
<td>51.0265</td>
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<tr>
<td>Operating Profit Growth 4yrs</td>
<td>314</td>
<td>208</td>
<td>156.7134</td>
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<td>Operating Profit as % Sales</td>
<td>464</td>
<td>280</td>
<td>-790.1063</td>
<td>-147.3104</td>
</tr>
<tr>
<td>Sales per Employee (1000s)</td>
<td>469</td>
<td>284</td>
<td>6628.4450</td>
<td>965.2694</td>
</tr>
<tr>
<td>Sales per Employee Growth 4yrs</td>
<td>469</td>
<td>284</td>
<td>32.4072</td>
<td>30.70777</td>
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<tr>
<td>Sales Outside Home Region (%)</td>
<td>234</td>
<td>138</td>
<td>37.7991</td>
<td>19.6812</td>
</tr>
<tr>
<td>Market Capitalisation</td>
<td>204</td>
<td>2</td>
<td>1465.8382</td>
<td>1149.0000</td>
</tr>
</tbody>
</table>

Note: *p<0.1; ** p<0.05; *** p<0.01
Entrepreneurship, Growth and the High Impact Firm: Comparing Indigenous and Foreign Firms

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and

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Aim of the paper

As the global economic crisis deepens with the consequent negative effect of increasing levels of unemployment and falling aggregate demand, it is important to understand how, where and why entrepreneurial firms are able to turn the tide by creating prospects of growth. This paper is concerned with entrepreneurial and ‘high-impact firms’ by which we mean firms that generate ‘both’ disproportionate levels of employment and sales growth, and have high levels of innovative activity (Acs et al., 2008). It investigates differences in factors influencing high-impact growth between indigenous and foreign firms.

The contribution to the literature

This study makes several original contributions by identifying differences in factors affecting high impact growth between indigenous and foreign firms. Specifically, the findings are: 1) First, regional knowledge resources – particularly local human capital and business R&D: lie at the heart of high impact growth for indigenous firms but to a lesser degree, foreign firms; 2) Secondly, however, because low-tech industries have less need for knowledge resources, we find that indigenous firms have less growth advantages over foreign firms in low-tech industries compared to high-tech industries; 3) Thirdly, because foreign firms appear to have less access to regional resources, their growth appears to be relatively more dependent on large size and internationalisation. On the other hand, for indigenous firms, small firms had significantly higher growth rates than large firms and were more reliant on. Thus, the hypothesis that small firms grow faster than large firms was only supported for indigenous firms; 4) Due to greater familiarity with local environment, growth rates of indigenous forms was not found to rely much on international markets but home markets, while that of foreign firms appears to be significantly associated with international markets.

The methodology
The study is based on an analysis of data drawn from United Kingdom (UK) Innovation Scoreboard on 753 firms in 12 UK regions. Based on 1992 Standard Industrial Codes (SIC), identified by CCC (2004), the firms were further classified into those belonging to high-tech industries and low-tech industries. These thus provide a unique data set that allows for critical analysis of firms generating both employment and sales growth. The data was for the most part analysed using multiple regressions, bivariate correlations and t-tests.

The results and implications

These insights have potential implications for local and national policies on job creation, firm growth and the concentration of firms in specific spaces, especially under circumstances where many firms are shedding their work force as they struggle for survival in recessionary times.

1. Introduction

Interest in firm growth theory now spans about 30 years. The initial excitement centred on the work of Birch, where job providers, were seen to be the smaller, younger firms (Birch, 1979, 1987). Once firms grow older, their ability to generate new jobs decline substantially. Birch’s work has influenced a whole generation of researchers and generated significant contributions to knowledge making an impact on both research and public policy promoting small and medium enterprises (SMEs) in many countries (Storey, 1994; Landstrom, 1996; Acs et al., 2008). In the United Kingdom (UK) from 1987–88 alone, public expenditure on promoting enterprise was almost £200 million, supporting more than 106,000 unemployed people to start new businesses (Storey, 1994). Further, in 2004, the UK government launched the ‘encouraging a dynamic start-up market’ one of the key pillars of small business policy reflecting the interest on small firms and growth (Stel and Storey, 2004).

Today, scholars of firm growth argue that most job creation by small-firm occurs within a relatively small number of firms – called Gazelles (Birch and Medoff, 1994; Acs et al., 2008). In this setting, gazelles are firms that “move between small and large (size) quickly...(characterised by) great innovation and rapid job growth” (Birch and Medoff, 1994: p.163). Acs et al. (2008) extended the work of Birch beyond firms with mainly employment growth, by adding the revenue growth variable to that of expanding employment. Firms showing both revenue and employment growths were referred to as “high-impact firms” in order to distinguish them from gazelles (Acs et al., 2008). The major conclusion of the work by Acs et al. (2008) is that high-impact firms are relatively old, rare and contribute to the majority of overall economic growth.

This perspective on high impact firms (Acs et al., 2008) is particularly important at a time of global economic crisis. However, a critical review of the literature (see below),
reveals that there is hardly any systematic study investigating a combination of region, sector specific or firm specific factors influencing high impact growth, and especially between indigenous and foreign firms. We believe that information about these factors could help with the formation of empirically informed policies for promoting high impact growth of firms that take into account the distinguishing features of indigenous and foreign firms (Nanchum and Keeble, 2003). Policies on local firm formation and growth and foreign firm investment can, therefore be supported on the basis of empirical evidence. Firm managers may also benefit from a more clear understanding of regional, sectoral and firm specific factors that could hinder or promote high impact growth of the firms. Managers of such firms can, therefore, design effective strategies for high impact growth.

The central research problem addressed by in this paper is that of the differences in region, sector and firm specific factors influencing high impact growth of indigenous and foreign firms. The paper claims several contributions to knowledge. We construct a High-Impact Growth Index (HIGI), which measures firms’ ability to generate both sales and employment growth over a long time period. A second contribution is the identification of differences in role of regional human capital, regional business R&D and regional university in the growth of indigenous and foreign owned firms. Thirdly, this study identifies the differences in the relative growth rates of indigenous and foreign owned firms in both high-tech and low tech sectors. Fourthly, this study examines the differences in the influence of firm size and internationalisation in the growth of indigenous and foreign firms. Taken together these contributions augment the literature on gazelles and high impact firms (Birch, 1979, 1987; Gallagher et al. 1990; Daly et al. 1991; Birch and Medoff, 1994; Acs et al., 2008) regional factor theorists (Jaffe, 19989; Acs, 2002; Krudsen, 2007) and firm ownership – indigenous and foreign firms (Buckley and Casson, 1976; Caves, 1996; Nanchum and Keeble, 2003).

The paper begins with a review of the literature on gazelles and high impact firms (Birch and Medoff, 1994; Acs et al., 2008). This is then followed by a presentation of theoretical arguments on whether high impact firms on differences on regional factors (Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2003), sectoral factors (Audretsch, 1998; Doloreux, 2003) and firm specific factors (Hall, 1987; Nerlinger, 1999; Nanchum and Keeble, 2003) influencing the high impact growth of indigenous or foreign owned firms.

2. The Evolution of the High Impact Firm Theory

In the 1970s and 90s, firm growth theories on job creation consisted mainly of the work of the prominent economist, David Birch (1979; 1987). Various other researchers confirmed one of Birch’s key conclusions, namely that small firms account for most new job creation in an economy (Birch, 1979, 1987; Gallagher et al. 1990; Daly et al. 1991). In Birch’s seminal work, titled The Job Generation Process (1979), he developed an ‘economic
micro-scope’ (Landstrom, 1996) that went beyond aggregate employment statistics so as to explain how the behaviour of individual firms leads to employment changes. Employing Dun & Bradstreet database in the United States (US), Birch initiated the systematic study of small businesses. Prior to his research only a few economists had studied small businesses in spite of their contribution to a large fraction of employment (Brock and Evans, 1989). Accordingly, Birch found that:

- In the US, about 60 percent of all jobs were created by firms employing fewer than 20 people; and almost 50 percent of the jobs were generated small by independent entrepreneurs. In contrast, large firms (employing more than 500 people) had less than 15 percent of all net new jobs.
- It was not all the small firms that were job generators. Rather, it was the smaller, younger firms that created jobs – and job generation abilities of firms declined once they were up to four years old.

Birch concluded that “whatever they are doing, however, large firms are no longer the major providers of new jobs for Americans” (Birch, 1981, p. 8). These seminal contributions have since then triggered a large canon of research, public policy measures and debate on the role played by small firms in employment creation (Gallagher et al. 1990; Daly et al. 1991; Acs et al., 2008). Researchers in other countries have long replicated Birch’s findings, with results of the UK (based on Dun & Bradstreet) indicating that small firms make a disproportionately large contribution to net job creation, although the contribution is not as high as estimated by Birch (Gallagher et al. 1990; Daly et al. 1991).

Gazelles

Birch’s work has also been subject to some criticism especially from Brown, Hamilton and Madoff (1990). In a book titled Employers Large and Small, they argued that:

Perhaps the most widespread misconception about small businesses in the United States is that they generate the vast majority of jobs and are therefore the key to economic growth. … Small employers do not create a particularly impressive share of jobs in the economy, especially when we focus on jobs that are not short lived (Brown, Hamilton and Madoff, 1990: p.1-2).

Subsequently, in early 1990s attempts at finding common ground between David Birch and James Madoff were made culminating in the emergence of another conceptual category of firms called ‘Gazelle’. Gazelles were defined as firms with significant revenue growth (Birch and Madoff, 2004). It was argued that the difference between the role of small and large firms in creating jobs is of less significance. The firms that create most jobs are gazelles, which are not necessarily small or large. “These gazelles move between small and large quickly—at various times in either direction—and to classify them by their size is to
miss their unique characteristics: great innovation and rapid job growth (Birch and Medoff, 1994: p. 163).

Since then, this perspective on gazelle has attracted attention from prominent entrepreneurship scholars (Parker, Storey and Witteloostuijn, 2005; Acs and Mueller, 2007). In 2005, Parker, Storey and Witteloostuijn (2005) take the study on gazelles further by developing a theory of dynamic management strategies of high-growth firms: gazelles. Based on a data set from Britain containing information on over 100 gazelles they advance a framework that emphasises dynamic, rather than static, management strategies as key high growth (Parker, Storey and Witteloostuijn, 2005). Another recent paper by paper by Acs and Mueller (2007) found that business start-ups with less than 500 employees have persistent employment effects over time and across large, diversified metropolitan regions. Therefore, Acs and Mueller (2007) conclude that gazelles and characteristics of the region are important for employment growth. Another important point is that gazelles account for almost all the job creation in the economy (Birch and Medoff, 1994; Acs and Mueller, 2007).

From Gazelles to High Impact Firms

Zoltan Acs, William Parsons and Spencer Tracey in a report entitled ‘The High Impact Firm: Gazelles Revisited’ (2008) for the US Small Business Administration (SBA) extended the scope of Birch and Medoff’s (1994) findings. They argue that although Birch’s research is important, very little is known about what high impact firms are before they become high impact firms. To distinguish their research from that of Birch, they went beyond Birch’s definition of gazelles to include firms with significant revenue growth and expanding employment, referring to such firms as ‘high impact firms’ (Acs, et al., 2008). Based on a critical analysis of data set drawn from American Corporate Statistical Library (ACSL), which covers data from both public and private sector sources over a 12-year period, they found that:

High-impact firms are relatively old, rare and contribute to the majority of overall economic growth. On average, they are 25 years old, they represent between 2 and 3 percent of all firms, and they account for almost all of the private sector employment and revenue growth in the economy (Acs, et al., 2008).

Acs, et al’s. (2008) conclusions support Birch’s observation that gazelles account for almost all the job creation in the economy, although their measures were not entirely comparable. They also found comparable findings with regard to firm size, but not firm age. High impact firm are not new firms and they are found in all firm-size classes. High-impact firms are rare and contribute to the majority of overall economic growth (Birch and Medoff, 1994; Acs et al., 2008).
3. Research Issues

We argue that the research on the subject still remains unsatisfactory at least for three key reasons. First, existing theories on gazelles and high impact firms are important in helping us to understand which firms create jobs, and how they impact on the economy (Birch and Medoff, 1994; Acs et al., 2008). But these theories do not take into consideration the importance of region specific factors affecting high impact growth of indigenous and foreign firms. By region specific factors, reference is being made to local human capital, business R&D and university R&D (Jaffe, 1989; Acs, 2002; Krudsen et al., 2007). This is of crucial importance especially in a time when economic policies are developed at the regional level (DTI, 1998; ERP, 2007). Such information will allow regional policy makers to understand the different roles local resources play in the growth of indigenous and foreign firms, thereby helping to design more informed policies specifically for indigenous and foreign firms. Secondly, it is not clear whether sector-specific factors have any impact on the growth of indigenous and foreign firms. These factors often refer to the extent to which high and low tech sectors rely on research and development (Butchart, 1987; Doloreux, 2003; CCC, 2004). At a time when many regional policies prioritise high-tech over low-tech sectors, it is important to understand whether such prioritisation should also apply to both indigenous and foreign firms. Thirdly, we appear to lack an understanding of the differences in the influence of varying ‘firm specific factors’ (such as ownership, firm size and internationalisation) for the high impact growth of indigenous and foreign firms. Such information could help both policy makers and managers of indigenous and foreign firms to understand whether the size of the firms offer greater advantages for firm growth, and also the extent to which their growth depends on international markets.

Table 1: Studies related to high impact firms and their weaknesses in relation to the research problem

<table>
<thead>
<tr>
<th>Author</th>
<th>Key Finding</th>
<th>Gap</th>
</tr>
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<tbody>
<tr>
<td>Birch (1979)</td>
<td>Small firms make disproportionate contribution to job generation in the US.</td>
<td>**</td>
</tr>
<tr>
<td>Birch (1989)</td>
<td>Small firms make disproportionate contribution to job generation in the US.</td>
<td>**</td>
</tr>
<tr>
<td>Gallagher et al. (1990)</td>
<td>Consistent pattern of small firms as net generators of jobs, and large firms as net losers in the UK</td>
<td>**</td>
</tr>
<tr>
<td>Brown, Hamilton and Madoff (1990)</td>
<td>Small employers do not create a particularly impressive share of jobs in the economy, especially when we focus on jobs that are not short lived</td>
<td>**</td>
</tr>
<tr>
<td>Daly et al. (1991)</td>
<td>In the UK, in job generation terms, although small firms are advantaged and have numerically dominant performance, it is important that large firm performance should not as a result be overlooked</td>
<td>**</td>
</tr>
<tr>
<td>Birch and Medoff (1994)</td>
<td>Gazelles account for almost all the job creation in the economy</td>
<td>**</td>
</tr>
<tr>
<td>Parker, Storey and Witteloostuijn (2005)</td>
<td>Conclude that dynamic, rather than static, management strategies are key to high-growth</td>
<td>**</td>
</tr>
<tr>
<td>Acs and Mueller (2007)</td>
<td>Gazelles and characteristics of the region are important for employment growth</td>
<td>**</td>
</tr>
<tr>
<td>Acs et al. (2008)</td>
<td>High-impact firms are relatively old, rare and contribute to the majority of overall economic growth</td>
<td>**</td>
</tr>
</tbody>
</table>

**Hardly compare differences between indigenous and foreign firms in terms of region specific, sector specific and firm specific factors influencing their high impact growth.
We contend that differences in factors influencing high impact growth between indigenous and foreign owned firms remain by and large obscure (see table 1). Identification of these differences provides the basis for generating new propositions related to the research problem and the development of a conceptual framework.

4. Conceptual Framework and propositions

The literature on localised knowledge spillovers sheds light on regional differences in resources that may affect the growth of indigenous and foreign firms. A review of this literature enables us to compare indigenous and foreign owned firms in terms region specific factors (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). The literature on high-tech and low-tech industries (Mahmood, 1992; Doloreux, 2003) allows us to find the theoretical basis for proposing that patterns of high impact growth by indigenous and foreign high impact firms may differ across sectors. Figure 1 below presents our conceptual framework for comparing indigenous and foreign firms in terms of differences in the three factors influencing their high impact growth. The region specific factors are local human capital, business R&D and university R&D (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). The sector specific factors relate to the nature of technology developed by firms – high-tech and low tech sectors (Doloreux, 2003). Finally, the firm specific factors are: firm size (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999) and internationalisation (ECLAC, 1985; Wilmore, 1986; Falvey et al., 2007).

Figure 1: Framework for Comparing Factors Influencing High Impact Growth by Indigenous and Foreign Firms

<table>
<thead>
<tr>
<th>Regional Factors</th>
<th>Sectoral Factors</th>
<th>Firm Specific Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Capital</td>
<td>High-tech sectors</td>
<td>Firm size</td>
</tr>
<tr>
<td>Business R&amp;D</td>
<td>Low-tech sectors</td>
<td>Internationalisation</td>
</tr>
<tr>
<td>University R&amp;D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

High Impact Growth

[Employment + Sales Growth]
This model integrates high impact firm literature (Acs et al., 2008), localised knowledge spillover theory (Acs, 2002; Stuart and Sorenson, 2003) and international business theory (Nanchum and Keeble, 2003). The aim is thus to empirically examine the effect of various factors on high impact growth (Acs, et al. 2008) by indigenous and foreign firms. What follows is a discussion of each component of the model so as to develop specific propositions on differences in the effect of the three factors on the growth of indigenous and foreign firms.

4.1 Region Specific Factors

The knowledge spillover theory mainly highlights the significance of local linkages for a firm’s generation of its own knowledge (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003). Localised knowledge spillovers are defined as “knowledge externalities bounded in space”, which allow firms operating in proximity to key knowledge sources to introduce innovations at a faster rate than rival firms located elsewhere (Breschi and Lissoni, 2001). Knowledge takes the form of local human capital, business R&D and government R&D (Acs, 2002; Stuart and Sorenson, 2003; Krudsen et al., 2007). According to Breschi and Lissoni, 2001, localised knowledge spillovers can be broken down into three logical chains (Breschi and Lissoni, 2001: p.258):

a. knowledge generated within innovative firms and/or universities is somehow transmitted to other firms;

b. knowledge that spills over is a public good, i.e., available to those wishing to invest for searching it out, and may be exploited by more than a few users at the same time;

c. Despite b., knowledge that spills over is mainly “tacit”, i.e., highly contextual and difficult to codify, and therefore is more easily transmitted through face-to-face contacts and personal relationships, which require spatial proximity; in other words, it is a public good, but a local one.

The key question here is the extent to which local knowledge is significant for high impact growth of both indigenous firms and foreign firms assuming they are located in the same region. Following the argument of localised knowledge spillover theorists, local entrepreneurs and managers are likely to have greater connections to technologists, universities and other local sources of knowledge since they are more likely to have close social connections (Stuart and Sorenson, 2003). However, foreign firms are also attracted to regions with key knowledge inputs in order to gain access to its specialised resources (Dunning, 1993; Nanchum and Keeble, 2003). International business theory suggests that gaining access to immobile resources (such as technologies and organisational capabilities) available in foreign countries is an important rationale for firms to invest outside their home country (Dunning, 1993; Wesson, 1997; Kuemmerle, 1998). Foreign firms attracted by
regions with resources can become insiders, and some of their needs can be met locally, in a manner similar to indigenous members of a local agglomeration or cluster (Nanchum and Keeble, 2003).

Paradoxically, foreign firms with their linkages with the rest of the transnational corporation (TNC) (Nanchum and Keeble, 2003) may have limited need for accessing local resources during the growth process. Greater cost disadvantages for foreign firms arising from unfamiliarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Nanchum and Keeble, 2003) suggest that local (indigenous) firms will benefit more from local resources due to more established social connections (Stuart and Sorenson, 2003). These observations lead to the proposition that regional knowledge resources are critical for high impact growth, especially for local firms.

**P1:** Regional knowledge resources lie at the heart of high impact growth for indigenous firms but to a lesser degree, foreign firms.

4.2 Sector Specific Factors

Since indigenous firms have higher levels of access to regional knowledge resources compared to foreign firms, we argue that such growth advantages are more likely to be in high-technology sectors rather than low technology sectors. This is because although in high-technology sectors, firms have a high level of requirement for external knowledge resources (Jaffe, 1989; Acs, 2002; Stuart and Sorenson, 2003), firms in low-technology sectors have less need for knowledge resources (Dolororeux, 2003). Therefore, the advantage of accessing knowledge resources that indigenous firms have in high-technology industries compared to foreign firms may be less important for their low-technology counterparts. Moreover, indigenous and foreign firms in low technology industries are likely to have less reliance on local knowledge resources. By way of contrast since foreign firms are often established by large multinationals, which often supply them with key resources (Nanchum and Keeble, 2003), we cannot expect indigenous firms to have higher growth rates than foreign firms in low-tech sectors.

**P2:** Indigenous firms are less likely to have higher growth advantages over foreign firms in low-tech industries (which require less knowledge resources) compared to high-tech industries.

4.3 Firm Specific Factors

**Firm Size**

One key finding on firm growth is that of the negative correlation between the growth rate of firms and their size. This finding suggests that small firms grow faster than large firms (Evans, 1987a,b; Hall, 1987; Nerlinger, 1999). This finding appears to support Birch’s contention that small firms create the majority of jobs in an economy (Birch, 1979,
However, the picture becomes less clear when firms are divided into indigenous and foreign firms.

We argue that smallness of size is less likely to be associated with the growth for foreign firms. Small foreign owned firms incur higher setting up and transaction costs in a host country compared to indigenous firms due to the unfamiliarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Kinoshita, 1998; Nanchum and Keeble, 2003) and greater lack of local social connections (Stuart and Sorenson, 2003). These disadvantages can however often be offset by their firm-specific advantages (Kinoshita, 1998; Nanchum and Keeble, 2003). Foreign firms incur sunk costs at the initial stage; thus large firms are considered to have better access to capital in comparison to small firms to off-set such costs (Horst, 1972; Kinoshita, 1998). Many researchers have concluded that large foreign firms have more advantages investing abroad compared to small firms (Horst, 1972; Lall, 1986; Blomstrom and Lipsey, 1986). Horst’s (1972) seminal work on foreign direct investment (FDI) from U.S. to Canada suggests that size is the key explanatory attribute of the positive coefficient that explains investment. Firm size was also found to be significant for foreign investment in a study on Indian firms by Lall (1986). More recently, some researchers on Japanese firms have found that if destinations go beyond Asia, firm size plays a significant role in Japanese investments (Horaguchi, 1992; Trevino and Daniels, 1994). This discussion leads us to the third proposition:

**P3:** While small, indigenous firms tend to grow faster than large firms, small foreign firms will not grow significantly faster than large firms.

Another important reason for expecting differences in factors influencing high impact growth between indigenous and foreign firms is the role of internationalisation. Researchers of international business have compared indigenous and foreign firms on a range of international related activities (ECLAC, 1985; Wilmore, 1986; Falvey et al., 2007) although not in terms of high impact growth. The results appear to suggest that foreign firms have advantages in terms of internationalisation in comparison to indigenous firms. Findings from these studies have shown that the possibility of exporting for a foreign firm doubles or even triples that of an indigenous firm (ECLAC, 1985). Other studies suggest that the costs of exporting are much lower for foreign firms, because they have more access to information on markets and sales organizations abroad (Wilmore, 1986; Buckley, 2001). The extent of internationalisation has positive effects on foreign firms. Falvey et al. (2007) argue that larger market size leads to higher survival probability for foreign-owned firms, but reduces the survival probability of indigenous firms.

When it comes to home markets, indigenous firms have comparatively more advantage because of their knowledge of local markets (Mirza, 1986; Casson, 1997; Mariotti and Piscitello, 1995). Hence, although indigenous firms may be able to benefit more from
home markets, they may not be able to participate in international activities to the same extent as their foreign counterparts. This implies greater advantages in international activities for foreign firms but more advantages for indigenous firms in home markets.

**P4:** Greater familiarity with local environment and greater access to local resources, restricts growth rates of indigenous firms to local markets, while foreign firms are more likely to be significantly associated with international markets.

These four propositions provide the basis for our investigation into high impact foreign and local firms.

5. **Data and Methods**

**Data and Geographic Level of Analysis**

The key database used in this study is the 2008 UK R&D Scoreboard, which is an international league table of the companies investing most in R&D. The report presents the latest data on investment in R&D and financial performance of the 850 most active UK owned and foreign companies operating in UK. With a focus on innovative high growth firms, the R&D Scoreboard provides reasonably rich data for testing some of the theoretical propositions developed above. The data has a geographic aggregation level of regional development authorities (RDAs) in UK, making regional analysis of such data more appropriate for economic policy, especially because the RDA level in the UK is where regional economic strategies are developed (Lambert, 2003; Adams and Smith, 2004). The data is analysed using bi-variate correlations, ordinary least square (OLS) regressions, as commonly employed in entrepreneurship and innovation studies (Jaffe, 1989; Acs, 2002; Abubakar and Mitra, 2007; Abubakar and Mitra, 2009; Abubakar, 2009).

**Variables and Measurements**

The R&D Scoreboard firms were thus sampled based on the following criteria: 1) firms must have 4 year employment growth data available; 2) firms with 4 year sales growth data available; 3) located with UK RDAs. This yielded a total of number of 753 firms. Below, we provide a definition of variables and their sources:

- **High Impact Growth** - The high impact firm definition was operationalised as firms with both sales and employment growth over a 4 year period (Acs *et al.*, 2008). We develop a new index termed “High Impact Growth Index (HIGI)” which measures the extent to which a firm achieves both positive employment and sales growth over a 4 year period. The index has a Cronbach’s alpha score of 0.5, which indicates reasonable level of reliability as used in other entrepreneurship studies (Manimala, 1999);

- **Ownership** – the R&D Scoreboard data classifies firms as UK owned (referred to here as ‘indigenous’) and foreign owned, or ‘foreign firms’;
- **Firm Size**—this was measured in terms of number of employees employed by firms, as this is the measure commonly used in many growth studies (Birch, 1979, 1989; Wagner, 1995).

- **Internationalisation**—is used to describe the outward movement or increasing involvement of a firm or larger grouping’s international operations (Johanson and Vahlne, 1987; Welch and Luostarinen, 1988). We measure internationalisation as the percentage of sales outside home region (Hejazi and Santor, 2005).

- **Regional human capital**: human capital at the regional level is defined as percentage of population with up to National Vocational Qualification (NVQ) 4+ as commonly used in entrepreneurship studies (Mitra and Gleave, 2007; Abubakar and Mitra, 2007; Lee et al., 2004). This variable is employed as many studies have shown that educational attainment is associated with entrepreneurship and innovation (Mitra and Gleave, 2007; Abubakar and Mitra, 2007; Lee et al., 2004).

- **Regional R&D**—We measure R&D at the regional level using R&D expenditure as generally used in entrepreneurship and innovation studies (Jaffe, 1989; Acs, 2002; Abubakar and Mitra, 2007; Abubakar and Mitra, 2009).

- **Other variables**—Almost all the other variables are taken directly from the R&D Scoreboard data (see the 2008 UK R&D Scoreboard for more information).

Figure 2 below shows the correlation between the high impact growth index and R&D growth. For both indigenous and foreign firms, high impact growth appears to be significantly correlated with increased R&D activities suggesting that high impact growth appears to be associated with R&D and entrepreneurial activities in terms of introducing new products and services (Abubakar, 2009; Abubakar and Mitra, 2009).

![Figure 2: Correlation between High Impact Growth Index (4 yrs) and R&D growth (4yrs)](image-url)
Appendix 1 presents the descriptive statistics that show a comparison between indigenous and foreign firms on a range of variables related to firm growth, R&D, sales, employment and financial information. In general, the data suggests that indigenous firms have significant higher performance in comparison to foreign firms.

6. Findings and discussion
6.1. Regional Factors

In this section we examine the proposition developed earlier that region specific resources are relatively more important for generating indigenous high impact firms compared to foreign owned high impact firms, although they are significant for both groups. Figure 3 shows the geographic concentration of high impact firms per 10,000 population i.e. firms that have generated both positive growth in sales and employment. The map shows variations in high impact firms on a per-capita basis at the regional level. It ranges from 3.7 firms per capita (Yorkshire and Humber) to 30 (London). The highest number of indigenous high impact firms in London (25.1), South East (18.1) and Eastern region (15.8), which rank 1st, 2nd and 3rd respectively. Similarly, the regions with the highest numbers of foreign high impact firms per capita are the South East (9.9), Eastern (5.4) and London (4.9). These suggest that most high impact firms in the UK are geographically concentrated around London, South East and Eastern regions (an explanation of these regional variations in the geography of high impact firms is provided later).

Figure 3: Geographic distribution of high impact firms
Note: This map depicts only firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Table 3 shows summary data on human capital and R&D for each of the UK regions. The table suggests a high level of disparity across regions in terms of human capital, business R&D, higher education institution (HEI) R&D and government R&D. Our primary interest here is thus the extent to which these regional resources are associated with indigenous and foreign high impact firms.

Table 2: Knowledge resources in UK regions

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<tbody>
<tr>
<td>Eastern</td>
<td>14.4</td>
<td>4350</td>
<td>580</td>
<td>366</td>
</tr>
<tr>
<td>London</td>
<td>25</td>
<td>1093</td>
<td>1559</td>
<td>299</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>12.8</td>
<td>177</td>
<td>139</td>
<td>19</td>
</tr>
<tr>
<td>Scotland</td>
<td>14.1</td>
<td>513</td>
<td>870</td>
<td>327</td>
</tr>
<tr>
<td>South West</td>
<td>15.5</td>
<td>1262</td>
<td>300</td>
<td>296</td>
</tr>
<tr>
<td>West Midlands</td>
<td>11.9</td>
<td>975</td>
<td>322</td>
<td>23</td>
</tr>
<tr>
<td>East Midlands</td>
<td>12.6</td>
<td>1053</td>
<td>307</td>
<td>90</td>
</tr>
<tr>
<td>North East</td>
<td>10.4</td>
<td>310</td>
<td>222</td>
<td>1</td>
</tr>
<tr>
<td>North West</td>
<td>12.9</td>
<td>2150</td>
<td>560</td>
<td>92</td>
</tr>
<tr>
<td>South East</td>
<td>17.8</td>
<td>3582</td>
<td>912</td>
<td>631</td>
</tr>
<tr>
<td>Wales</td>
<td>12.3</td>
<td>227</td>
<td>254</td>
<td>44</td>
</tr>
<tr>
<td>Yorkshire &amp; Humber</td>
<td>12.2</td>
<td>417</td>
<td>493</td>
<td>49</td>
</tr>
</tbody>
</table>

Note: This table depicts only firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Sources: DTI (2001); Business Enterprise Research and Development Scotland (2007)

Next, we examine the relative impact of these regional resources on number of high impact firms per capita. Since in this analysis, we are only interested in high impact firms, only firms with both positive employment and sales growth over a four year period were selected. Accordingly, the analysis is conducted across the twelve UK regional development authority (RDA) regions. We use the regional population measure to control for varying sizes of regions (Lee et al., 2004). The number of high impact firms is reported on per capita basis. Table 4 reports the results of the regression analysis. Consistent with our proposition, it appears that region specific resources are more associated with indigenous high impact firms (0.94) in comparison to foreign high impact firms (0.71), although both are highly significant at p ≤0.01. Thus, indigenous firms appear to derive higher benefits from local knowledge resources in comparison to foreign firms. However, it appears that knowledge generated in another country can be accessed and has a significant impact on the growth of foreign firms, which is in contrast to arguments of some scholars who argue that spillovers are highly localised (Audretsch, 1998;
Stuart and Sorenson, 2003). It seems that foreign firms even in the UK are particularly attracted to regions with high levels of local resources. This finding is similar to that of Abubakar and Mitra (2009) who reported significant correlations between international knowledge sources and innovative activities of small firms.

Table 3: Region specific resources and number of high impact firms per capita at UK regional level

<table>
<thead>
<tr>
<th></th>
<th>High impact firms per capita</th>
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<tbody>
<tr>
<td></td>
<td>Indigenous</td>
</tr>
<tr>
<td>Human capital</td>
<td>0.945***</td>
</tr>
<tr>
<td>Business R&amp;D</td>
<td>0.362***</td>
</tr>
<tr>
<td>HEI R&amp;D</td>
<td>-0.129</td>
</tr>
<tr>
<td>Government R&amp;D</td>
<td>-0.014</td>
</tr>
<tr>
<td>R Square</td>
<td>.940***</td>
</tr>
</tbody>
</table>

Note: *p<0.1; ** p<0.05; *** p<0.01

N=12

Note: This analysis is conducted only on firms that have generated ‘both’ positive growth in sales and employment over the 4 year research period. Firms with negative growth rates in sales and/or employment have thus been excluded.

Another important finding emerging from the regression results is that while human capital and business R&D appear have positive effects on the number of high impact firms across the UK regions (both indigenous and foreign) once the effect of all other factors are controlled (business R&D and human capital) university R&D appears to be insignificant for both groups of firms. This finding implies without strong local business R&D and local human capital, university R&D plays an insignificant role for firm growth. Thus, it seems although university R&D is highly important for the creation of innovative start-ups (Saxenian, 1994; Abubakar and Mitra, 2007), it plays less significant role for firm growth, except where the region has a reasonably good pool of human capital and business R&D. When the effect of business R&D and human capital are not removed, we observe positive correlations for both indigenous (correlation=0.80) and foreign firm (correlation =0.47) between firm growth and university R&D across the regions. However, once effect of business R&D and human capital are controlled the partial correlations become negative and insignificant for both indigenous (correlation = -0.12) and foreign firms (correlation = -0.49). Hence, it seems that regional business R&D and human capital mediate the effect of university R&D on firm growth.

In brief, the results of the analysis appear to support our first proposition. The different results for indigenous and foreign firms clearly demonstrate the need to take into account varying effects of local resources for firm growth by the two groups of firms.

6.2. Sectoral Factors

Since foreign firms have lower levels of access to local knowledge resources compared to indigenous firms, such growth disadvantages are more likely to be found in high technology sectors. We test the proposition that while indigenous firms may have significantly higher growth advantages in high-tech sectors due to greater access to regional
knowledge resources, (which require less knowledge resources), no significant differences are likely to exist in the growth rates of indigenous and foreign firms in low technology industries.

We first classify sectors into high-tech and low-tech industries (Butchart, 1987; CCC, 2004). High-tech industry definition was originally developed by Butchart (1987) based on selected industries from 1980 Standard Industrial Classification (SIC). This provided a definition of high-tech industries based on the ratios of a) R&D expenses to sales and b) employees working in R&D to total employees. In 2004, Butchart’s (1987) original 1980 SIC code classification of high-tech sectors, was built upon by the authoritative Cambridgeshire County Council (CCC, 2004), which identified high-tech sectors through the modernised 1992 SIC codes. This definition has been employed in a number of entrepreneurship and innovation studies (Keeble et al., 1999; Athreye, 2001; Abubakar, 2009). We also considered sectors in the R&D scoreboard data that relate closely to CCC (2004) high-tech sectors as high-tech industries; while all the other sectors were considered as low tech industries.

Table 5 below gives descriptive statistics on growth and R&D investment measures between the high-tech industries and low-tech industries identified. In general, in line with Butchart’s (1987) definition, the high-tech sectors appear to higher scores for various R&D indicators.

### Table 4: R&D investment (2007/8)

<table>
<thead>
<tr>
<th>Industry</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D (Millions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>594</td>
<td>28.7273</td>
<td>181.46227</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>159</td>
<td>24.8598</td>
<td>74.09179</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Sales</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>587</td>
<td>548.5070</td>
<td>9916.83751</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>158</td>
<td>5.4076</td>
<td>30.39804</td>
</tr>
<tr>
<td>R&amp;D as Percentage of Operating Profit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High tech industries</td>
<td>390</td>
<td>383.6369</td>
<td>2572.60153</td>
</tr>
<tr>
<td>Low tech industries</td>
<td>142</td>
<td>73.8246</td>
<td>347.89680</td>
</tr>
</tbody>
</table>

**High-tech sectors:**
Pharmaceuticals & biotechnology, Health care equipment & services, Electronic & electrical equipment, Technology hardware & equipment, Software & computer services, Leisure goods, Automobiles & parts, Industrial engineering, Electricity, Chemicals, Aerospace & defence, Fixed line telecommunications, Oil equipment, Services & distribution, Mobile telecommunications, General industrials, Industrial transportation, Industrial metals, Oil & gas producers etc.

**Low-tech sectors:**
Beverages, Media, Personal goods, Food producers, Support services, Construction & materials, Travel & leisure, Financial services, Household goods, General retailers, Forestry & paper, Nonlife insurance, Mining, Life insurance etc.

In order to test our second proposition, the high impact growth index (HIGI) discussed in the methodology section is used as the proxy for high impact growth.\(^2\) We use a t-test to examine whether growth rates of indigenous and foreign firms in high-tech industries but not low tech industries. Accordingly, figure 4 below depicts the t-test results. The results appear to support our contention that indigenous firms have less growth advantages than

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\(^2\) See section on data methods for more details
foreign firms in low-tech industries. A relatively smaller difference in the mean figures was observed for low-tech industries compared to high-tech industries.

**Figure 4: Differences in High Impact Growth Index between indigenous and foreign firms in high-tech and low-tech industries**

a) High-tech industries

b) Low-tech industries

Although a number of studies suggest that indigenous firms have more advantages compared to foreign firms due to greater familiarity with the local environment (Buckley and Casson, 1976; Caves, 1996; Kinoshita, 1998; Nanchum and Keeble, 2003), our finding suggest that it is important to acknowledge that such performance differences are more likely to exist in high-tech industries rather than low-tech industries. Low-tech industries have less need for knowledge resources compared to high-tech industries (Audretsch, 1998). Even if foreign firms are more likely to lack social connections to providers of knowledge resources, this disadvantage becomes less important in industries that require lower levels of technical know-how. Having found some differences in the importance of sector related factors for the growth of firms in the two groups, what roles do firm-specific factors such as firm size play in the growth of indigenous and foreign firms.

6.3. Firm Specific Factors: Size and Internationalisation

We examine our third proposition, which states that while for indigenous small firms tend to grow faster than large firms, small foreign firms will not grow significantly faster than heir larger counterparts. In statistical terms, this suggests that while for indigenous firms, the High Impact Growth Index will be significantly higher for small firms compared to large firms; for foreign firms, no significant difference will be found between small and large firms.

We begin by classifying firms into small and medium enterprises (SMEs) and large firms. We use the American definition of firms having less than 500 employees so as to be in line with existing literature on gazelles and high impact firms (Birch, 1979, 1989; Birch and Madoff, 1994; Acs et al., 2008). First, we carry-out a simple bi-variate correlation between firm size and growth for indigenous firms separately and then foreign firms separately. For
indigenous firms, we find firm size to be negative and significantly correlated with high impact growth ($p \leq 0.1$). This appears to be in line with the argument that small firms grow faster than large firms (Evans, 1987a and b; Hall, 1987; Nerlinger, 1999). In contrast, however, we do not find any significant negative correlation between firm size and growth for foreign firms. It appears that small size may not be a significant factor in influencing the high impact growth of foreign firms.

**Table 5: Correlation between firm size and high impact growth**

<table>
<thead>
<tr>
<th></th>
<th>Indigenous Firms</th>
<th>Foreign Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Impact Growth Index</td>
<td>-0.083*</td>
<td>-0.007</td>
</tr>
</tbody>
</table>

Indigenous firms ($N=469$); Foreign firms ($N=284$); Note: *$p<0.1$; **$p<0.05$; ***$p<0.01$

Next, we conduct t-tests separately for indigenous and foreign firms in order to determine differences in the High Impact Growth Index of SMEs and large firms. Table 6 below displays the results of the t-test. Consistent with the results found earlier (see table 5); we find that for indigenous firms, SMEs are significantly more likely to experience high impact growth ($p \leq 0.05$) compared to large firms. As far as foreign firms are concerned we find no statistically significant difference between the growth of SMEs and large firms ($p \geq 0.1$).

**Figure 5: High Impact Growth Index: comparing SMEs and large firms**

<table>
<thead>
<tr>
<th></th>
<th>SMEs</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Firms</td>
<td>-0.23%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Foreign Firms</td>
<td>-0.16%</td>
<td>-0.21%</td>
</tr>
</tbody>
</table>

**Table 6: Differences between SMEs and large firms in High Impact Growth**

<table>
<thead>
<tr>
<th></th>
<th>Size Classification</th>
<th>N</th>
<th>Mean</th>
<th>t-test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Firms</td>
<td>SMEs</td>
<td>220</td>
<td>0.2259186</td>
<td>0.05**</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>249</td>
<td>0.0118657</td>
<td></td>
</tr>
<tr>
<td>Foreign Firms</td>
<td>SMEs</td>
<td>115</td>
<td>-1.1554055</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>169</td>
<td>-2.058285</td>
<td>0.39</td>
</tr>
</tbody>
</table>

Note: *$p<0.1$; **$p<0.05$; ***$p<0.01$

Our findings suggest the need for a distinction between indigenous and foreign firms when observing that small firms grow faster than large firms (Evans, 1987a and b; Hall, 1987; Nerlinger, 1999). These findings confirm our proposition that small foreign firms are unlikely
to grow faster than large firms. This as mentioned earlier is due to disadvantages faced by foreign firms compared to indigenous firms because of costs arising from unfamiliarity with the environment. These disadvantages can be offset by their firm-specific advantages such as their large size (Horst, 1972; Kinoshita, 1998). Size plays different roles in the drama of high impact growth of foreign and indigenous firms.

We also expect more firm-specific differences in factors influencing the growth of indigenous and foreign firms, especially in terms of the internationalisation process. We proposed that due to greater familiarity with the local environment and greater access to local resources, the growth rates of indigenous forms is less likely to occur in international markets. This proposition contrasts with the view that foreign firms are more likely to be significantly associated with international markets. To test our fourth proposition, we adopt a measure of internationalisation, which is measured as the percentage of sales outside home region (Hejazi and Santor, 2005).

Figure 6 below shows the simple bi-variate correlation between the High Impact Index and proportion of sales outside home region for indigenous and foreign firms. The results suggest that while the growth rate of foreign firms is significantly correlated with proportion of sales outside home region (p<0.01), the growth rate of indigenous firms does not appear to be significantly correlated with proportion of sales out home region (p>0.1).

Figure 6: Correlation between High Impact Index and Proportion of sales outside home region

Correlation = 0.04; P>0.1
Note: *p<0.1; ** p<0.05; *** p<0.01

Correlation = 0.24; P<0.001***
Note: *p<0.1; ** p<0.05; *** p<0.01
It appears that although indigenous firms have higher growth rates, a large proportion of their sales occur within home markets. The role of home market for firm growth appears to be particularly important for indigenous firms. In contrast, the growth of foreign firms appears to be more dependent on the extent of sales beyond home markets. Therefore the role that internationalisation plays for firm growth may need to be distinguished, depending on whether firms are foreign and indigenous owned. This does not mean that internationalisation is not important for indigenous firms, rather, their growth relies less on international markets. This is likely because indigenous firms have less access to information on markets and sales organizations abroad (Wilmore, 1986; Buckley, 2001).

7. Conclusion

Recent theories of firm growth view small firms as the primary engine of employment generation and growth (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999). While firm related characteristics such as small size are considered important for firm growth, it remains unclear whether differences exist in factors influencing the growth of indigenous and foreign firms – especially in both employment and revenue (high impact growth). This study examined differences in the influence of specific, sector and region specific factors influencing high impact growth. Using data on 753 firms, 35 sectors classified into high-tech and low tech industries and 12 regions of the UK, we made several original findings.

7.1. Original Findings

First, regional knowledge resources – particularly local human capital and business R&D; lie at the heart of high impact growth for indigenous firms but to a lesser degree for foreign firms; Regional resources play a more crucial role in the high impact growth of indigenous firms compared to local firms even when they are both located in the same region. Second, because low-tech industries have less need for knowledge resources, we find that indigenous firms have less growth advantages over foreign firms in low-tech industries in comparison to high-tech industries. Therefore, although foreign firms can be more unfamiliar with the local environment and have less social connections to providers of local knowledge resources (Nanchum and Keeble, 2003; Stuart and Sorenson, 2003), this disadvantage becomes less important for firm growth in industries that require less knowledge i.e. low tech industries.

Thirdly, also, because foreign firms appear to have less access to regional resources, their growth appears to be relatively more dependent on large firm size. In contrast, for indigenous firms, small firms have significantly higher growth rates than large firms. The finding that small firms grow faster than large firms (Birch, 1979, 1989; Evans, 1987a, b; Hall, 1987; Nerlinger, 1999) was only supported for indigenous firms. This carries an implication
for job generation by foreign firms; small foreign firm may not generate more jobs than their larger counterpart.

Fourthly, due to greater familiarity with local environment, growth rates of indigenous forms was not found to rely much on international markets but home markets, while that of foreign firms appears to be significantly associated with international markets. Therefore the significance of the home market for firm growth may have been underestimated by the excessive focus on firm internationalisation especially because indigenous firms were found to have faster growth rates. Thus, this study is likely the first attempt towards identifying differences in factors affecting high impact growth between indigenous and foreign firms. Below, we report some refutation findings.

7.2. Refutational Findings

In contrast to the expectations of researchers on university spillovers (Jaffe, 1989; Audretsch, 1998; Stuart and Sorenson, 2003), once regional business R&D and human capital are controlled, we find no evidence that firm growth rates across UK regions between 2004-2008 are positively impacted by university R&D. When the effects of regional business R&D and human capital are not controlled, university R&D becomes positively associated with firm growth for both indigenous and foreign firms. Even though university R&D plays crucial role in region’s ability to generate innovative start-ups (Abubakar and Mitra, 2007), it seems a region may only benefit from university R&D in terms of firm growth if the business R&D in the region is strong and there is sufficient human capital in the region to ‘absorb’ the research outputs. Regional human capital and business R&D mediate the effect of university research, and therefore without them, university R&D may not be significant for firm growth.

7.3. Implications for Policy

In encouraging high impact growth by indigenous and foreign firms policy makers should take into account specific differences in the regional, sectoral and firm specific factors influencing growth as indicated above. A blanket strategy may not be very effective in fostering the growth of indigenous and foreign firms. If regional policy makers wish to encourage the use of university R&D for firm growth, it is important for them to contextualise their value by ensuring that there are sufficient levels of business R&D and human capital complements and absorbs these assets. Fostering commercialisation of university R&D should be done in association with encouragement of both human capital and business R&D.

7.4. Limitations

Researchers are often criticised for not making clear the environments to which their theories apply. The present analysis is concerned only with firms that have significant R&D activities, especially since the sample was drawn from R&D Scoreboard data. Therefore, the results of the analysis on indigenous firms are applicable only to indigenous firms that engage
in R&D; while the findings on foreign firms are mainly applicable foreign firms that conduct R&D. Also, this study is limited to firm growth in employment and sales; it does not consider other growth and firm performance measures. Any attempt to apply the findings of this research in other regions must take into account the contexts within which the research was conducted.

References


**Appendix 1: Descriptive Statistics**

<table>
<thead>
<tr>
<th>Ownership</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-tests (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Size</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Indigenous</td>
<td>469</td>
<td>10550.6482</td>
<td>40661.5821</td>
<td>0.00***</td>
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<tr>
<td>Foreign</td>
<td>284</td>
<td>2275.7852</td>
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<td>High Impact Growth Index (HIGI)</td>
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<tr>
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<td>1.21190599</td>
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<td>284</td>
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<tr>
<td>Employment Growth 4yrs</td>
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<td>36.4499</td>
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<td>Foreign</td>
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<td>Sales Growth 4yrs</td>
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<td>Foreign</td>
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<td>R&amp;D Growth 4yrs</td>
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<td>R&amp;D as Percentage of Operating Profit</td>
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<tr>
<td>R&amp;D as Percentage of Sales</td>
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<td>as % of sales</td>
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<td>Operating Profit (Millions)</td>
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<td>Sales per Employee (1000s)</td>
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<td>Sales Outside Home Region</td>
<td>234</td>
<td>138</td>
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<td>(%)</td>
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<td>6919.39529</td>
<td>1475.02475</td>
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</tbody>
</table>

Note: *p<0.1; ** p<0.05; *** p<0.01
The relevance of the region for new ICT ventures: Challengers or victims of geography?

Frank Lasch, GSCM-Montpellier Business School
Frédéric Le Roy, GSCM-Montpellier Business School & University of Montpellier
Frank Robert, GSCM-Montpellier Business School

Abstract
In this study, we formulate a set of hypotheses to measure the influence of ‘conventional’ Marshall-Arrow-Romer localization economies and ‘new economy’ localization factors concentrating on geographical proximity. To understand the principles of localization for a new industry, we examine the relationship between entrepreneurship and local environment for the emerging period of the ICT sector. What are the regional preconditions to foster and to attract this type of entrepreneurship? Which theoretical framework applies for the new venture creation in this sector (predominance of existing regional structure vs. economies of localization of a ‘new economy’)? These are the questions the present study deals with.

Keywords: France, high tech entrepreneurship, ICT sector, local environment, proximity effects

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In an “entrepreneurial economy” (Audretsch, 1995), innovation and knowledge-based entrepreneurship is a strategic topic for the economic development of regions. But to understand why innovation-based entrepreneurship happens, we must first understand where it happens. The geography of innovation and production has raised much research interest in the past and localization economies and their influence on economic growth have provided first frameworks for the understanding of this relationship (e.g., Marshall-Arrow-Romer theories). Exploring this key issue, we examine innovation and knowledge-based entrepreneurship in an industry which emerged in the early 1990s and has become today, after initial controversy discussions (“Solow paradox”), commonly agreed (Souter, 2004), an important growth sector in many countries across Europe: The information and communication technologies (ICT).

This specific industry bears a particular research interest, as the diffusion of information and communication technologies is naturally expected to challenge the relationship between geographical proximity and the accumulation of knowledge (Ceh, 2001; Lethiais et al., 2003). In this line, innovation and knowledge-based ICT entrepreneurs are often described as “footloose” (Huffmann & Quigley, 2002) and challengers of the dependence from geography (“death of distance”; Cairncross, 1997). Following this viewpoint the competitive advantage of location would tend to diminish or even disappear. In opposition to these approaches grounded in diffusion theory, different authors stress the persistence of regional structure principles and argue that new technologies like e-commerce are not about to dissolve the laws of regional organization (Coucelis, 2004). From a more technical viewpoint, Graham underlines that deployment of telecommunications networks remain driven by geographic imperatives which makes ‘information age’ or ‘network society’ not as immaterial and anti-geographical as assumed (2001: 405).

In reality, confirming the latter, we observe that ICT firms concentrate geographically. Today, three regions hold 10% of the UE-27 employment in the ICT sector (Meri, 2007): The Ile-de-France agglomeration (4.3%, France), the Lombardia region (2.5%, Italy), and the Communidad de Madrid (2.1%, Spain). Amongst those three countries, we shift our focus to France where, in opposition to the “death of distance” theory, ICT firms tend rather to concentrate and cluster than to diffuse spatially (Suire, 2003; Lasch, 2003). France reveals to be specifically dynamic in ICT entrepreneurship, but this process masks sharp regional disparities: whereas some areas are particularly “entrepreneurial” others seem not to be affected at all.
Understanding the main forces for this asymmetric process is important for entrepreneurship as a mechanism that converts innovation into new products, services and economic growth. Analyzing the newness of industries, we will explore in this paper a.) Why ICT entrepreneurs become concentrated in some regions leaving others relatively undeveloped, and we will b.) Identify and measure regional determinants that attract ICT entrepreneurship.

1. Literature review

1.1 Theoretical background

Entrepreneurship research exploring the relationship between the emergence of new ventures and space is an interdisciplinary effort in nature and draws much upon economic geography literature. Empirical findings in the past revolved mainly around three theories of localization economies: Marshall-Arrow-Romer (‘MAR’, Marshall, 1890; Arrow, 1962; Romer, 1986) privileged industrial specialization to foster innovation, Porter (1990) added competition and market structure to the MAR theory, and finally Jacobs (1969) formulated the principle of industrial diversity as engine for regional growth as opposed to the Marshallian localization economies. In the following, Glaeser, Kallal, Scheinkman & Shleifer (1992) distinguished between static (pecuniari) and dynamic externalities (knowledge spillovers).

In the same line, endogenous growth theories stressed the role of regional human capital and innovation for economic growth and provided useful insights to analyze the emergence of new ventures in one place (Romer, 1986; 1990; Arrow, 1962; Nijkamp & Poot, 1998). New economic geography focused on market forces to explain the geographical concentration of manufacturing activities (Krugman, 1991), putting forward circular logic\(^1\) as trigger for the formation of agglomerations (Krugman, 1998). Cluster theories describe emergence of geographic concentrations of interconnected firms (Porter, 1998) and use a variety of factors including market forces and local demand. Against this background, knowledge based economy approaches move interaction between firms in the center of discussion analyzing geographical

\(^1\) ‘\(\ldots\) firms want to concentrate production (because of scale economies) near markets and suppliers (because of transportation costs); but access to markets and suppliers is best where other firms locate (because of market-size effects). This circular logic can produce agglomerations’ (Krugman, 1998: 166).
proximity to external knowledge and innovation sources, formal and informal networks, and knowledge spill-overs (Audretsch & Keilbach, 2007). Loosely speaking, all these streams of literature revolve around the idea that industries and firms tend to concentrate in agglomerations in order to take advantage of spillovers to generate increasing returns at a spatial level.

1.2 Regional determinants of entrepreneurship

1.2.1 Local market demand: a key factor also relevant for high tech venturing?

There is agreement in literature that demand factors (measured through population growth or household incomes) are key determinants for entrepreneurship. Strong empirical evidence for the positive effect of market demand has been found in France, Germany, Sweden, the United Kingdom and the USA. Johnson & Parker (1996) measure a strong impact of market demand on entrepreneurship in the UK, Armington & Acs (2002) for the USA, Carree & Dejardin (forthcoming) for Belgium, Guesnier (1994) and INSEE (2000) for France. Also in Finland, Turkey and Japan, market demand has been measured positively (Kangasharju, 2000; Gaygısız & Köksal, 2003; Okamuro & Kobayashi, 2006). Garofoli (1994) obtains no significant influence of this variable for the case of Italy.

Hypothesis 1 (Local market): Local market opportunities are positively related to high tech entrepreneurship.

1.2.2 Agglomeration effects: economies through a high quality infrastructure?

There is agreement in literature that agglomeration economies are also key factors of entrepreneurship in a region. According to Audretsch & Fritsch (1994) entrepreneurs reduce their transaction costs by benefiting from positive, local externalities (a specialized job market, highly developed infrastructure, regional networks, knowledge spillovers, etc.). These spillovers are typical for regions with a high population density (Audretsch & Fritsch, 1994: 360). Reynolds et al. (1994) provide evidence for a positive influence of this factor in France, Sweden, and the UK. They explain variations of new firm birth rates between regions\(^2\) by positive externalities for start-ups in agglomerations. However, Lasch (2007) studying the impact of regional determinants in France between 1993 and 2001 at labour market level, measures no significant effect of agglomeration economies. In Italy, even if Garofoli finds no real impact of agglomeration effects, Capello (2002) presents empirical findings for the positive influence

\(^2\) Geographical level of analysis: the 100 French “departments”.)
of this determinant for high tech entrepreneurship. But some authors present opposite findings and suggest diseconomies in case of important market barriers or costs (Bade & Nerlinger, 2000; Nerlinger, 1998). Folta et al. (2006) present similar findings for diseconomies in agglomerations. While the findings for the UK appear to be consistent, the findings for the USA are contradictory. Armington & Acs (2002) explain regional differences in entrepreneurship mainly by agglomeration economies, but Bartik (2001) measures a negative impact of this variable in the USA. Gaygisiz & Köksal (2003) consider agglomeration economies as main explanatory factor for the case of Turkey, as do Okamuro & Kobayashi (2006) for the case of Japan.

**Hypothesis 2 (Agglomeration):** Agglomeration economies are positively related to high tech entrepreneurship.

### 1.2.3 Regional human capital: endogenous entrepreneurial potential and high qualified labor market

The analysis of human capital linked to the working population of a region is important insofar as most start-ups are founded in proximity of the entrepreneurs’ residence (Keeble et al., 1993: 17). New firms reflect in some way the regional “endogenous” potential and proximity effects (Schmude, 1994a: 173). The concept of human capital is one of the most privileged sources to explain the success and performance of high tech ventures (Brüderl et al., 1996), but is also considered as a main resource for the emergence of new firms. Harrison et al. (2004) study the Ottawa technology cluster and argue that entrepreneurs are exogenous, attracted to talent pools and stress the importance of the economic geography of talent and human capital to explain high tech entrepreneurship. Acs & Armington (2004a) explain differences in levels of entrepreneurial activity with the diversity among geographically proximate industries and the extent of human capital. Spatial differences are related with the share of high qualified working population, especially for industries that require entrepreneurs with a broad knowledge base (Acs & Armington, 2004b). While authors agree on the importance of this factor especially for knowledge intense entrepreneurship, results for entrepreneurship in general (all industries) are more confusing. Bartik (2001) finds a positive relationship between the high qualification level and small business start-ups in the USA. For Germany, results are contradictory. Fritsch (1991) first found no significant evidence, but measures in a later study a positive relationship (Audretsch & Fritsch, 1994). Bade & Nerlinger (2000), measure a positive correlation. Musyck (2003) highlights a process of long-term continuity in the accumulation of skills combined with a process of industrial renewal. For the case of the United King-
dom, no significant relationship was found by Reynolds et al. (1994) as opposed to the findings of Georgellis and Wall (2000). Human capital has been confirmed for Spain (Blasco & Fornielles, 2001), Japan (Okamuro & Kobayashi, 2006) and France (Guesnier, 1994; Lasch, 2007), but not for Turkey (Gaygisiz & Köskal, 2003).

Human capital proxied by a high qualified working population is stands also for networking opportunities (Aldrich & Zimmer, 1986; Greve & Salaff, 2003).

*Hypothesis 3 (Human capital): A highly educated and workforce is positively related to high tech entrepreneurship.*

### 1.2.4 Unemployment: accelerator or brake for entrepreneurship?

It has been claimed that high unemployment in a region favors entrepreneurship, as unemployed working population seeks self-employment as an escape out of unemployment (“unemployment push” theory). But empirical evidence for this regional determinant is considerably more ambiguous. Fritsch (1991), states that a high unemployment rate does not lead to high levels of entrepreneurship. Paradoxically, Audretsch & Fritsch (1994) measure a positive correlation between unemployment and firm birth in the same West Germany Länder. Hinz & Jungbauer-Gans (1999) argue that entrepreneurs starting out of a situation of unemployment have higher hurdles to pass if they want to raise capital. Studies for France tend rather to confirm the unemployment-push theory (Guesnier, 1994; Lasch, 2007). The above cited studies for Japan and Spain confirm this finding. Foti & Vivarelli (1994) measure a negative relationship for the case of Italy. Reynolds et al. (1995) have found negative correlations. Carree (2002) finds little evidence for unemployment push theory, but describes that differences appear between industries.

Applied to the specific type of high tech venturing, local unemployment rates may not primarily stimulate entrepreneurship in a region as entrepreneurs come rarely from lower qualified socio-professional categories with a typically higher probability of staying unemployed (Lasch, 1997).

*Hypothesis 4 (Unemployment): A high unemployment rate in a region is negatively related to high tech entrepreneurship.*

### 1.2.5 Industry structure: shadow of the past?

Authors do not agree on the impact of this variable, and present different and sometime contradictory findings. Johnson (2004) argues that structural characteristics of a region may influence start-up activity with growing industries attracting new firms and declining industries
shedding firms. Industry structure is considered in many studies and two proxies are mainly used: sector structure and firm size. Tödtling & Wanzenböck (2003) measure a higher start-up activity for tertiary centers in Austria, compared to substantially lower rates in old industrial or rural areas. Okamuro & Kobayashi (2006) measure a higher start-up rate for Japanese regions with a low share of manufacturing. Fritsch & Niese (2000) argue that the impact of a region’s industrial structure on the number of start-ups is rather low in Germany. Bade & Nerlinger (2000) measure no significant effect of regional sector structure on high tech entrepreneurship (services) in Germany. Reynolds et al. (1994) find no systematic empirical evidence in the UK. Blasco & Fornielles (2001) measure a negative effect in Spain. For France, the INSEE (2000) study measures a negative impact of sector specialization and a positive one for sector diversification, while Lasch (2007) finds no significant effect of sector diversification at the labour market level.

Hypothesis 5a (Industry structure 1): Concentration rather than diversification favors high tech entrepreneurship.

While the effect of industry structure is not unanimously approved, authors agree on the influence emanating from local firm size structures. Kangasharju (2000) presents strong evidence for the seedbed effect small firms produce for entrepreneurship in Finland. The firm size of the last employment of the entrepreneur can be relevant for the learning process of managerial skills which are crucial for most authors (Cooper et al. 1994; Pleschak, 1997). Employees in SMEs seem to have more opportunities to gain entrepreneurial and managerial knowledge compared to those in large firms with a higher division of labour (Greenan, 1994; Schmude, 1994a). Small firms can also use symbiotic, collaborative arrangements with larger firms to overcome size constraints and to improve their international competitiveness (Eternad et al., 2001).

Firms founded by entrepreneurs with experience in large firms seem to be less sustainable (Lasch et al., 2007; Pleschak, 1997). But as for most of the determinants of regional start-up activity, results differ across sectors. Keeble & Walker (1994) present findings for the positive impact of a labor market area dominated by small firms, while large firms rather seem to stimulate entrepreneurship in the service sector. Large firms play an important role as potent customers and initiators for outsourcing (Almus et al., 1999) as well as incubators (Nerlinger, 1998; Pleschak, 1997). Close to 90% of the ICT start-ups in France belong to the service sector, we consequently expect a high influence emanating from large firms embedded in the local economy.
Hypothesis 5b (Industry structure 2): Large firms rather than small firms are positively related to high tech entrepreneurship.

1.2.6 Knowledge and space: competitive advantage for entrepreneurs in clusters?

Acs et al. (2005) argue that knowledge is created endogenously, especially via R&D results in knowledge spillovers, and that such spillovers give rise to opportunities to be identified and exploited by entrepreneurs. Meusburger (2000) argues that innovations and new knowledge emerge in some places, in some contexts, and in interaction with the socio-economic environment. Forni & Paba (2002) analyze Italian manufacturing sectors and provide evidence for clustering of industries based upon dynamic externalities. Local research and development structures (universities, non-university institutes, private R&D firms, etc.) represent important knowledge externalities for high tech entrepreneurs (Engel & Fier, 2000; Meyer-Krahmer & Schmoch, 1998; Fritsch & Schwirten, 1998). Dahlstrand (1999) analyzes the Göteborg area in Sweden and shows that the major parts of new entrepreneurs were endogenous and former employees of large firms, students or local universities’ personnel. Audretsch et al. (2004) confirm that university spillovers have a strong influence in the strategic locational decisions of firms. Huffmann & Quigley (2002) confirm this finding for the Silicon Valley and underline the role of universities as a factor of attraction and stimulation of entrepreneurial talent. Greunz (2005) presents findings for intra-regional knowledge spillovers in European regions. Bade & Nerlinger (2000) present empirical findings for Germany that high tech entrepreneurship spreads in proximity to universities and other R&D facilities. Fischer & Varga (2003) confirm this for the case of Austria. Findings for France outline that entrepreneurs benefit mostly from research activities in their close neighborhood and less from research in more distant areas (Autant-Bernard, 2001). Public researchers becoming entrepreneurs are rarely observed (Mustar, 1995 & 1997; Emin, 2003).

To summarize, the level of availability of regional knowledge externalities fosters (or inhibit) the organizational emergence of high tech entrepreneurship (Audretsch, 1998; Collinson & Gregson, 2003; Nguyen & Vicente, 2003).

Hypothesis 6a (Knowledge): Regional knowledge externalities are positively related to high tech entrepreneurship.

Another facet of knowledge externalities is interaction between firms located in the same area. Spatial clustering has raised a strong research interest. Localization economies emanating from the neighborhood of firms of the same or similar activities are of particular impor-
tance for high tech entrepreneurs as they depend more on synergies, interaction and cooperation as low tech industries (Bade & Nerlinger, 2000; Van Oort & Atzema, 2004). Innovation and synergy play a crucial role in the regional development and competitiveness (Ritsilä, 1999) and stress the importance of proximity effects and interaction between firms in the local context.

Asleben (2005) argues that Industries with stronger competition appear to avoid more frequently agglomeration while those with weaker competition cluster. Proximity is often similar to good opportunities of integration in the local network (Pleschak, 1997; Koschatzky, 1997). Entrepreneurs of emerging knowledge-based firms dedicate significantly more time when compared to non-innovative firms to cooperation and networking (Johanisson, 1998; Nijkamp, 2003). Varamäki & Veslainen (2003) demonstrate that co-operation leads to cooperation once entered in the first co-operation agreement. The firms’ capacity to innovate improves if they co-operate with other firms over innovation in addition to or instead of investing in R&D (De Propris, 2002). Face-to-face contacts are essential, in particular concerning “implicit” knowledge and highly specialized information (Koschatzky, 1997; Saxenian, 1990 and 1994; Storper & Venables, 2004).

A high concentration of ICT firms in an area is also an indicator for future entrepreneurs of a well developed infrastructure for their business and inspires a favorable business “climate” for the realization of their entrepreneurial project (Simmie, 2002).

Hypothesis 6b (Proximity): Proximity effects are positively related to high tech entrepreneurship.

1.2.7 The attraction of a region: life quality and government incitation (taxes)

Attractive lifestyle environment, a rich natural environment, a clement climate (“sunbelt effect”) describe the general attraction of a region for entrepreneurs. These factors are considered by as especially important for the location choice of “footloose” firms (George, 1991; Rouzier, 1987). Incitements for entrepreneurs include macro or meso-level (taxation, regulation, etc.) and micro-level policies (advice, training, finance, technology transfer, etc.; Mcquaid, 2002). Grants, tax breaks or a low tax level, for example, are traditional measures aimed at encouraging entrepreneurial activity and localization of new firms. Bartik (2001) measures a negative relationship for regional attraction in the USA.

Hypothesis 7a (Life quality): Attraction of a region favors high tech entrepreneurship.

Hypothesis 7b (Tax level): A low income tax level in a region favors high tech entrepreneurship.
2. Methods

From a methodological viewpoint, the research design responds to the claim of more longitudinal studies analyzing one sector at a time. We analyze the relationship between high tech entrepreneurship (new firm formation) and the regional environment on the aggregate level of the labor market area (LMA). In our study, an empirical lead forward was made as the French national institute of statistics and economic studies (INSEE) granted us exceptional data access to explore an entire population of new ventures. The independent variables are crossed in a multiple regression model with the ICT firm birth rate (dependent variable) in each of the 348 French labour market areas.

2.1 Data

France is one of the few European Union member states that have developed a statistical and administrative register of all existing firms (entitled “SIRENE” database: the official French register of all existing and newly created firms; Picard, 1995: 4) and exceptionally rich sources of economic and population statistics can be exploited for regional studies on different aggregate levels. Our data include information of every new ICT firm founded between 1993 and 2001 (84,535 start-ups3) in the 348 labour market areas of metropolitan France. This data in combination with the long observation period and the fine grained geographic unit of analysis (LMA) permitted us to obtain highly significant and statistically solid results. Additionally, we use socio-economic data for the labour markets (census data, labour statistics, etc.) to cross the local firm birth rates with proxies describing the environment.

2.2 Observation period and aggregate level

The literature review outlines also the claim for more longitudinal research. Consequently, we focus on longitudinal analysis (annual firm birth rates between 1993 and 2001) in combination with a fine grained zoning (labor market areas). We use the labour market aggregate level for our analysis. These labor market areas (LMA) are aggregations of the 33,000 municipalities in France into 348 LMA4. Reflecting the economic area of influence of agglomerations

3 Overseas departments excluded.
4 Oversea departments (“DOM-TOM”) excluded.
and small and middle-sized towns (at the difference to the French “départements” or the “régions”) these travel-to-work areas are much more suitable for studying the local economic context in which the founder implants his business (Houdebine, 1999: 192; Hecquet & Laine, 1999: 11).

2.3 Defining the ICT sector

Appendix A details the four digits SIC code definition of the ICT sector. The definition is similar to most of the recent publications in France dealing with the ICT sector (Cases et al., 1999; Heitzmann & Rouquette, 1999; Rouquette, 1999). According to our definition, the ICT sector is composed by three subsectors: high tech industries; computer/software services and telecommunications; other knowledge intense services (non university R&D, technical studies, analysis, testing and inspections). According to our definition, the French ICT sector accounts for 87,200 firms and more than 710,000 employees in 2001. The firm size is in average 1,9 employees and nine firms out of ten belong to the service sector. The new firm formation (NFF) in this sector represents during the period of observation 4,6% of all economic activities (industry, trade and services, ICS) and 5,4% of all jobs generated by new firms at start-up.

2.4 Dependent variable

High tech venturing (dependent variable) is measured by the local firm birth rate (LMA) in the ICT sector. The firm birth rate is defined as the number of new ICT firms divided by the number of all existing firms in a labour market area (“ecological approach”: see Schmude, 1994b for an overview about different measures of new firm formation rates). As we focus on the comparison of firm birth intensity between areas, we calculate our rate in combination with the location quotient (Schmude, 1994b). Hereby firm birth rate in an area measured in using the ecological approach is divided by the national firm birth rate.

2.5 Independent variables

The 16 independent variables (Table 1) are defined as follows. Market demand (H1) is measured by two proxies. Population growth is supposed to trigger entrepreneurship, but (future) entrepreneurs need time to recognize opportunities and to react. Thus, to capture this time-lag, we use census data prior to the observation period (1982-1990). The second proxy for market demand indicates the average household income. Agglomeration economies (H2) are synonym to a high developed infrastructure typically found in areas with a high population densi-
ty per km². The regional qualification level is used as an indicator for human capital structure and measures the part of high qualified people at the working population (H3). Unemployment in opposition to the education level is used as proxy for regions with an insufficient labor market pool for high tech entrepreneurship (H4).

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1: Market demand</strong></td>
<td></td>
</tr>
<tr>
<td>Population growth between 1982 and 1990*</td>
<td>population growth</td>
</tr>
<tr>
<td>Average net household income (in 1994)*</td>
<td>household income</td>
</tr>
<tr>
<td><strong>H2: Agglomeration economies</strong></td>
<td></td>
</tr>
<tr>
<td>Population density per km² (1990)*</td>
<td>density</td>
</tr>
<tr>
<td><strong>H3: Qualification</strong></td>
<td></td>
</tr>
<tr>
<td>Part of the working population with university degree and higher intellectual professions in the regional employment (1993 in %)*</td>
<td>qualification level</td>
</tr>
<tr>
<td><strong>H4: Unemployment</strong></td>
<td></td>
</tr>
<tr>
<td>Local unemployment rate (1993 in %)*</td>
<td>unemployment</td>
</tr>
<tr>
<td><strong>H5: Industry structure</strong></td>
<td></td>
</tr>
<tr>
<td>Index of sector diversification (1994)*</td>
<td>diversification</td>
</tr>
<tr>
<td>Part of the regional employment held by the service sector (1995 in %)**</td>
<td>specialization</td>
</tr>
<tr>
<td>Part of the regional employment held by small firms (0 to 5 employees; 1993 in %)**</td>
<td>SMEs</td>
</tr>
<tr>
<td>Part of the regional employment held by large firms (&gt;200 employees; 1993 in %)**</td>
<td>large firms</td>
</tr>
<tr>
<td><strong>H6: Knowledge externalities &amp; proximity effects</strong></td>
<td></td>
</tr>
<tr>
<td>Part of students per residential population (1993 in %)*</td>
<td>university</td>
</tr>
<tr>
<td>Part of employment in private R&amp;D firms in the regional employment (1993 in %)**</td>
<td>R&amp;D</td>
</tr>
<tr>
<td>Part of the regional employment held by ICT firms in computer services and telecommunications (1993 in %)**</td>
<td>ICT services</td>
</tr>
<tr>
<td>Part of the regional employment held by ICT firms in knowledge intense services (1993 in %)**</td>
<td>knowledge intensive services</td>
</tr>
<tr>
<td>Part of the regional employment held by ICT firms in high tech industries (1993 in %)**</td>
<td>high tech industry</td>
</tr>
<tr>
<td><strong>H7: Attraction of a region</strong></td>
<td></td>
</tr>
<tr>
<td>Tourist attraction (number of emplacements in camping sites in 1994)*</td>
<td>life quality</td>
</tr>
<tr>
<td>Professional taxes rate (1993)*</td>
<td>tax level</td>
</tr>
</tbody>
</table>

* Colinearity test has been applied to exclude conflict between variables: all the proxies are confirmed.
* Indicators provided by the French national institute of statistics and economic studies (INSEE).
** Indicators calculated by authors (SIRENE data base).

Table 1: Description of independent variables

The four proxies for industry structure describe the sectoral mix of the local economy and local firm size structures (H5a: specialization displays the balance of industry vs. service activities and diversification indicate to which degree economic activities are split over several sectors; H5b: SME as proxy for the number of regional employment held by small firms up to five employees and large firms describe employment in firms 200 employees). Five variables measure the impact of knowledge externalities (H6a) and proximity effects (H6b). University indicates the share at the residential population of students and researchers in public universities. R&D proxies the number of employees in private research and development firms or institutes. Proximity effects are described as employment in existing ICT firms split into the
three main subdivisions of this sector (high tech industry, ICT services, and knowledge intense services). Two indicators measure the attraction of a region for entrepreneurs. Life quality is proxies by the tourist attraction of a region (H7a). The local firm tax level is an indicator for pecuniary, in this case the fiscal attraction of a LMA for entrepreneurs (H7b).

3. Results
The regression obtains a solid overall result (R²=0.9629; Table 3) confirming the explanatory value of the model for regional determinants of high tech entrepreneurship. Colinearity test revealed no conflict between the variables. We explain this overall result of our model with the high quality of the data available for our study (longitudinal data for an entire population in combination with a fine grained geographical zoning). Table 2 presents the results obtained for each variable. Ten variables are highly significant at the 1% level, two variables are only confirmed at the 10% level (diversification, SMEs), four variables obtained no significant result at all (specialization, high tech industry, life quality, tax level). H1, H2, H3, and H4 statistically validated as all proxies are significant at the 1% level. H5b is testing the impact of local firm size structures on high tech entrepreneurship and finds a strong support for the large firms proxy. Our model fully supports the importance of knowledge externalities (H6a). Proximity effects (H6b) are entirely validated, but the insignificant result for high tech industry emphasizes notable difference between services and industry ICT subsectors. Our model finds no significant support for the influence of the local sector structure (H5a), as only one proxy passes the 10% significance threshold (diversification). H7 (attraction of the region) is fully rejected as no proxy obtains any significant result. Eliminating size or unit effects, the standardized regression coefficient enables us to compare directly the results for each variable.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Standardized coefficient¹</th>
<th>ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>qualification level (H3)</td>
<td>0.3605***</td>
<td>1</td>
</tr>
<tr>
<td>ICT services (H6)</td>
<td>0.2406***</td>
<td>2</td>
</tr>
<tr>
<td>large firms (H5)</td>
<td>0.2168***</td>
<td>3</td>
</tr>
<tr>
<td>population growth (H1)</td>
<td>0.2125***</td>
<td>4</td>
</tr>
<tr>
<td>knowledge intense services (H6)</td>
<td>0.1704***</td>
<td>5</td>
</tr>
<tr>
<td>unemployment (H4)</td>
<td>-0.1045***</td>
<td>6</td>
</tr>
<tr>
<td>universities (H6)</td>
<td>0.0839***</td>
<td>7</td>
</tr>
<tr>
<td>R&amp;D (H6)</td>
<td>0.0730***</td>
<td>8</td>
</tr>
<tr>
<td>density (H2)</td>
<td>0.0633***</td>
<td>9</td>
</tr>
<tr>
<td>household income (H1)</td>
<td>-0.0003***</td>
<td>10</td>
</tr>
<tr>
<td>SMEs (H5)</td>
<td>-0.0640*</td>
<td>11</td>
</tr>
<tr>
<td>diversification (H5)</td>
<td>0.0353*</td>
<td>12</td>
</tr>
<tr>
<td>specialization (H5)</td>
<td>-0.0208</td>
<td>ns.</td>
</tr>
<tr>
<td>high tech industry (H6)</td>
<td>0.0020</td>
<td>ns.</td>
</tr>
</tbody>
</table>
4. Discussion

We identify two key factors for high tech entrepreneurship: positive knowledge externalities and interaction between firms indicated by the positive effect of geographical proximity (localization economies). These knowledge spill-overs and proximity effects are far more important than agglomeration effects. While some demand factors (large firms & local market demand) trigger entrepreneurship, certain weaknesses of institutional knowledge and innovation transfer appear in France (university, R&D). As the following discussion will show, the factors triggering ICT entrepreneurship are in some cases different from the results obtained by prior studies in various countries (industry structure, regional attraction, etc.; cf. Table 3).

We identify five topics that provide explanation how geography matters for high tech entrepreneurship: education and knowledge, local demand and firm size, the role of universities and R&D, critical thresholds linked to agglomeration economies, relative independence from industry structure and general regional attraction.

4.1 Education and knowledge: main triggers for entrepreneurship

Two main questions arise when we consider the regional factors human capital and knowledge: Does the spatial concentration of knowledge and qualification (education) concord with the intensity of high tech entrepreneurship as stressed by Meusburger (2000; H3)? Do high tech entrepreneurs take advantage in clusters (knowledge externalities, networking opportunities, localization economies due to proximity effects, etc.) as suggested by several authors (Armington & Acs, 2002; Bade & Nerlinger, 2000; Capello, 2002; H6)?

Hypothesis 3 examines the role of human capital, one of the most privileged regional factors for high tech entrepreneurship in literature. Our results confirm that entrepreneurs have competitive advantages in labor markets with a high education and knowledge potential. Regional governments should consider that mobilizing the human capital for entrepreneurship in a region depends also on the willingness, motivation, and cultural openness of highly educated people to become entrepreneurs. This is especially true for regions with a high qualified labor market but low levels of entrepreneurship.
Hypothesis 6 examines knowledge and space under a different angle and measures proximity effects between new firms that belong to the same sector. With two variables under the top five ranked (ICT services, knowledge intense services; Table 2), geographical proximity is the main result measured by our regression model. The concentration of innovative firms in a regional economy stimulates high tech entrepreneurship. Local innovation and knowledge networks are strategic factors able to embrace a cumulative process based on innovation. Intensiifying regional knowledge and high tech networks facilitates the integration, the survival and growth of new ICT firms in a region.

Finally, the negative result obtained for unemployment (H4) confirms the role of education and knowledge as main triggers for entrepreneurship. Nevertheless, regional governments must be aware of structural features to prevent fallacy: High tech entrepreneurship in a region can go hand in hand with high unemployment rates when the working population structure is heterogeneous (i.e. high shares of low qualified and high qualified working population).

In sum, geography of education and geographical proximity are to be considered as the main triggers for high tech entrepreneurship in a region.

4.2 Crucial demand factors: local market demand and large firms

Hypothesis 1 examines one of the most important factors for entrepreneurship as identified in prior studies (market demand). Conforming to the literature review, we expected a positive impact of this regional key factor for high tech entrepreneurship. Nevertheless, the high regression result obtained for this variable is a rather surprising result. Local market demand appears to have a quite stronger importance for ICT entrepreneurship as displayed by most studies. Bathelt (1992), Fritsch (1990) and Koschatzky (1997) for example argue that innovation- and technology-based firms concentrate firstly on national and international markets. They are considered to be rather “footloose” and little involved in the local context. But the positive influence of the local market is (at least in the crucial post-creation period), more important than pointed out by those authors.

Average household income, another indicator for H1, revealed to be of minor importance for ICT entrepreneurship. Reluctant entrepreneurial attitudes prevailing positive effects due to consumer behavior (purchasing power) may explain the negative result measured for this variable. In France, investing private venture capital into new firms, or becoming self-employed seems not be a principal career option for households with a high average income.

The main implication resulting from H1 is twofold: first, new ICT ventures are especially sensitive to the local market: a growing market potential and large firms trigger demand and
are a critical part of the entrepreneurial process. Second, local market demand is to be considered also as an indicator for migration and fostering the potential of new ventures is closely linked to integration and local networking opportunities, at least in the early development stage of the firm.

Local firm size is an important demand factor (H5), insofar as large firms embedded in the local area produce one of the best regression results (rank 3 out of 12; Table 2). Labor markets with a high share of small firms turn out to be less favorable environments for high tech entrepreneurship. Even if many authors identify a higher propensity of employees in small firms for spin-off entrepreneurship, explained by a more efficient transmission of managerial or entrepreneurial knowledge and skills, this seedbed effect does not prevail in the ICT sector. We explain our result with structural features of new ICT ventures. In majority services, entrepreneurs may be sensitive to demand-side advantages large firms represent as important potential customers, but large firms may also trigger local spin-offs offering opportunities for new client-customer relationships.

4.3 University and R&D: insufficient knowledge transfer?

As our results indicate, education and knowledge are main regional factors for entrepreneurship, but to our surprise universities and non-university R&D institutes (or firms) don’t confirm their role as important sources of external knowledge and incubators for future entrepreneurs. Even if the result is statistically significant, the regression coefficient is weak, comparing to other knowledge related determinants. The relationship between new ICT firms and universities, generally considered as crucial, appears weaker in France, which supports the findings of Emin (2003) and Guillaume (1998) and outline insufficient knowledge transfer. Mobilizing entirely this potential presents another point on which public authorities can concentrate their effort.

4.4 Agglomeration economies: a critical threshold?

Hypothesis 2 examines the role of agglomeration economies for high tech entrepreneurship suggesting positive externalities for new ICT ventures emerging in labour markets with a highly developed infrastructure. Agglomeration economies do not figure amongst the most important regional factors (rank 9 out of 12). So, positive agglomeration effects, typical for areas with a high population density and a well developed infrastructure, can turn into diseconomies. This finding confirms the results of Bade & Nerlinger (2000) for German high tech firms. Agglomeration economies turn into diseconomies when a certain size of urban and
economic concentration starts more to hamper than to foster entrepreneurship. Consequently, we have to reject H2 and to affine our knowledge about the geography for high tech venturing. This finding leads us to include the factor of critical thresholds also in the interpretation of localization effects (proximity).

4.5 High tech entrepreneurs: independent from industry structure and regional attraction?

In literature, the general attraction of a region (sunbelt effects, life quality, etc.) or structural heritage linked to the individual industrial growth path are often advanced to explain why certain areas are more entrepreneurial for emerging sectors than other. Our results present no empirical evidence for these regional factors. Neither the industry structure (H5a) of a region, nor the general attraction (H7) influence high tech venturing in a significant way. The professional tax level also belongs to this category of determinants where no significant impact is measured and probably no real lever for entrepreneurship exists for regional policy.

The same result is obtained for the sector specialization, insignificant in our regression model. Similar to specialization, no significant link with high tech entrepreneurship can be established in regions with a high sector diversification. Entrepreneurial activities in the ICT sector do not directly depend on sector structures in an area. This finding confirms the results of Fritsch & Niese (2000) and Schmude (1994b).

<table>
<thead>
<tr>
<th>Regional factors for entrepreneurship</th>
<th>Confirmation of prior studies*?</th>
<th>Advances comparing to prior studies*?</th>
</tr>
</thead>
<tbody>
<tr>
<td>population growth</td>
<td>yes (strong impact)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>household income</td>
<td>no (very weak influence)</td>
<td>no (expected result)</td>
</tr>
<tr>
<td>density</td>
<td>no (very weak influence)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>qualification level</td>
<td>yes (strongest correlation in the model)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>unemployment</td>
<td>no (negative correlation)</td>
<td>no (expected result)</td>
</tr>
<tr>
<td>diversification</td>
<td>no (insignificant)</td>
<td>no (expected result)</td>
</tr>
<tr>
<td>specialization</td>
<td>no (insignificant)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>SMEs</td>
<td>no (negative correlation)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>large firms</td>
<td>no (positive correlation)</td>
<td>yes (strong influence)</td>
</tr>
<tr>
<td>universities</td>
<td>no (significant, but very weak influence)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>no (impact weaker than expected)</td>
<td>yes (surprising result)</td>
</tr>
<tr>
<td>ICT services</td>
<td>no prior research work available</td>
<td>yes (new finding)</td>
</tr>
<tr>
<td>knowledge intense services</td>
<td>no prior research work available</td>
<td>yes (new finding)</td>
</tr>
</tbody>
</table>
**Table 3: Synopsis of results and advances comparing to prior studies**

<table>
<thead>
<tr>
<th>high tech industry</th>
<th>no prior research work available</th>
<th>yes (new finding)</th>
</tr>
</thead>
<tbody>
<tr>
<td>life quality</td>
<td>H7 (Regional attraction)</td>
<td>no (insignificant)</td>
</tr>
<tr>
<td>tax level</td>
<td>no (insignificant)</td>
<td>no (expected result)</td>
</tr>
</tbody>
</table>

*Nota bene: most prior studies were not sector specific and considered all or several branches of the economy.*

**Conclusion**

This study examined the role of the socio-economic environment on entrepreneurship and identified regional key factors for high tech ventureing. An empirical lead forward was made in studying one sector at a time and by including data of all new ICT firms created between 1993 and 2001 in the 348 French labor market areas (84,535 firms). Entrepreneurship constitutes a regionally differentiated process in the ICT sector we examined. The main determinants are knowledge externalities, localization economies, local embedded large firms and population growth. Contrary to most researches the influence of agglomeration effects is not clearly measured. The conclusion is at hand that the impact of knowledge externalities should reinforce the position of large and middle sized agglomerations, amplifying existing regional disparities. Nevertheless, our results relativize, to a certain extent, this tendency due to the greater flexibility of new ICT firms in terms of location than non-innovative firms.

Our study opens some directions for future research. Future research should consider more multiple level designs. In connecting with this point, we put particular focus on the need for transferring results obtained on an aggregate level to an individual level. So, a number of our findings could be detailed, for example the role played by universities, large firms, local market structures, spin-offs from existing firms, networking and co-operation, in the entrepreneurial process of ICT ventures. These are only a limited number of possible starting points for future research. In so doing, we see a great potential for further research, for a better understanding of the key determinants of new firm birth but also of those of the survival and growth.
REFERENCES


APPENDIX A

Table A1

ICT sector definition

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>246J</td>
<td>Fabrication of data support</td>
</tr>
<tr>
<td>300A</td>
<td>Fabrication of business machines</td>
</tr>
<tr>
<td>300C</td>
<td>Fabrication of computer and hardware</td>
</tr>
<tr>
<td>321A</td>
<td>Fabrication of passive electronic components and condensators</td>
</tr>
<tr>
<td>321B</td>
<td>Fabrication of active electronic components</td>
</tr>
<tr>
<td>322A</td>
<td>Fabrication of radio emitting and transmitting components</td>
</tr>
<tr>
<td>322B</td>
<td>Fabrication of telephones</td>
</tr>
<tr>
<td>323Z</td>
<td>Fabrication of equipments for the reception, recording and reproduction of sound and image</td>
</tr>
</tbody>
</table>

Computer services & Telecommunication (services)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>642B</td>
<td>Other providers except national (France Telecom)</td>
</tr>
<tr>
<td>713E</td>
<td>Location of business machines and computer system</td>
</tr>
<tr>
<td>721Z</td>
<td>Consulting in information and computer systems</td>
</tr>
<tr>
<td>722Z</td>
<td>Software development</td>
</tr>
<tr>
<td>723Z</td>
<td>Data administration and use</td>
</tr>
<tr>
<td>724Z</td>
<td>Development and administration of data bases</td>
</tr>
<tr>
<td>725Z</td>
<td>Repair and services for business machines and computer systems</td>
</tr>
<tr>
<td>726Z</td>
<td>Other computer related services</td>
</tr>
</tbody>
</table>

Other knowledge intense services

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>731Z</td>
<td>R&amp;D in natural and physical sciences</td>
</tr>
<tr>
<td>732Z</td>
<td>R&amp;D in human sciences</td>
</tr>
<tr>
<td>742C</td>
<td>Engineering and technical studies</td>
</tr>
<tr>
<td>743B</td>
<td>Technical analysis, testing and inspections</td>
</tr>
</tbody>
</table>

APPENDIX B

Table B1

Results of the non standardized regression coefficient

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Regression coefficient</th>
<th>Rank</th>
<th>Standardized Regression coeff.</th>
<th>Independent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>0.1706***</td>
<td>1</td>
<td>0.3605*** qualification level</td>
<td></td>
</tr>
<tr>
<td>ICT services</td>
<td>0.1411***</td>
<td>2</td>
<td>0.2406*** ICT services</td>
<td></td>
</tr>
<tr>
<td>knowledge intense services</td>
<td>0.0985***</td>
<td>3</td>
<td>0.2168*** large firms</td>
<td></td>
</tr>
<tr>
<td>qualification level</td>
<td>0.0228***</td>
<td>4</td>
<td>0.2125*** population growth</td>
<td></td>
</tr>
<tr>
<td>unemployment</td>
<td>-0.0147***</td>
<td>5</td>
<td>0.1704*** knowledge intense services</td>
<td></td>
</tr>
<tr>
<td>population growth</td>
<td>0.0119***</td>
<td>6</td>
<td>-0.1045*** unemployment</td>
<td></td>
</tr>
<tr>
<td>large firms</td>
<td>0.0060***</td>
<td>7</td>
<td>0.0839*** universities</td>
<td></td>
</tr>
<tr>
<td>SMEs</td>
<td>-0.0034***</td>
<td>8</td>
<td>0.0730*** R&amp;D</td>
<td></td>
</tr>
<tr>
<td>universities</td>
<td>0.0026***</td>
<td>9</td>
<td>0.0633*** density</td>
<td></td>
</tr>
<tr>
<td>household income</td>
<td>0.0002***</td>
<td>10</td>
<td>-0.0003*** household income</td>
<td></td>
</tr>
<tr>
<td>density</td>
<td>0.0002**</td>
<td>11</td>
<td>-0.0640** SMEs</td>
<td></td>
</tr>
<tr>
<td>tax level</td>
<td>-0.0023°</td>
<td>12</td>
<td>0.0353° tax level</td>
<td></td>
</tr>
<tr>
<td>diversification</td>
<td>-0.0037</td>
<td>ns</td>
<td>-0.0175 tax level</td>
<td></td>
</tr>
<tr>
<td>high tech industry</td>
<td>-0.0007</td>
<td>ns</td>
<td>0.0020 high tech industry</td>
<td></td>
</tr>
<tr>
<td>life quality</td>
<td>0.0001</td>
<td>ns</td>
<td>0.0316 life quality</td>
<td></td>
</tr>
<tr>
<td>specialization</td>
<td>-0.0007</td>
<td>ns</td>
<td>-0.0208 Specialization</td>
<td></td>
</tr>
</tbody>
</table>

R²=0.9629 (adj. R²= 0.9611). ***sign. 1%; **sign. 5%; *sign. 10%; ns. not significant.
APPENDIX C

Measuring the firm birth rate ($fr$)

Formation rates may be measured in different ways (see Schmude, 1994b: 95 for an overview). Two dimensions make the basically difference: the choice of the denominator and the choice of the observation period (“snapshot” vs. long time series). The use of the registration stock is called “ecological approach”. Another alternative is to use the population or work force as the denominator (“labor market approach”). We choose to analyze the NFF in the ICT sector over a long time period and calculate the firm birth rate using the ecological approach. Additionally, our interest is also in the comparison of firm birth intensity between areas, so we calculated our rate in combination with another method, the “location quotient”. Hereby firm birth rate in an area measured in using the ecological approach is divided by the national firm birth rate (figure C1). In so doing, the firm birth rate obtained permits easily to measure the local dynamics in terms of NFF of each labor market area. For example, a firm birth rate of 2.0 signifies a new firm birth intensity twice as important as the national average (which is 1.0).

FIGURE C1

The measure of the firm birth rate

<table>
<thead>
<tr>
<th>Measuring the formation rate: the ecological approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>$FR = \frac{\text{number of new ICT firms in an area}}{\text{number of all existing firms in an area}}$</td>
</tr>
<tr>
<td>$\frac{\text{number of new ICT firms in the whole country}}{\text{number of all existing firms in the whole country}}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measuring a “dynamic” formation rate between two events</th>
</tr>
</thead>
<tbody>
<tr>
<td>$FR_{\text{dyn}(t_0-t_1)} = \frac{FR(t_0) + FR(t_1)}{2}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measuring a “dynamic” formation rate for longitudinal series</th>
</tr>
</thead>
<tbody>
<tr>
<td>$FR_{\text{dyn}(t_0-t_n)} = \frac{\sum_{i=0}^{n} FR(t_i)}{n+1}$</td>
</tr>
</tbody>
</table>

Source: Schmude, 1994a: 95 (modified).
INVESTIGATING STRATEGIC BEHAVIOUR IN SMALL, MICRO AND MEDIUM TOURISM ENTERPRISES IN SOUTH AFRICA

Dimitri Tassiopoulos¹, Tobie De Coning² and Eon Smit³

Abstract

The South African small, micro and medium tourism enterprises (SMMTE) sector faces numerous challenges. To ensure long-term sustainability the owners of SMMTEs need to make efficient and effective strategic business decisions about the internal and external threats and challenges their businesses face. The paper explores the potential dynamic interrelationships between profile attributes and preferred strategic behaviour of SMMTEs. The results provide important guidelines for interventions aimed at optimising the behaviour of these enterprises and, in so doing, to enhance the probability that they will be sustainable and successful. Important insights are gained on these enterprises and their owner operators, which account for a major part of South Africa's developing tourism sector. In an international context the paper also makes a contribution to the body of knowledge concerning this important economic sub-sector.

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JSBM Research Area: 3. Small Business Strategy and Organization


**Introduction**

In 1994, with the end of apartheid, the South African government undertook to make tourism one of the country’s leading industries in the creation of employment and the generation of foreign income (Tassiopoulos, 2008). Although the tourism industry has some large organisations, the sector is numerically dominated by SMMTEs, according to Szivas (2001), Kirsten and Rogerson (2002), and Cooper and Buhalis (1992), yet in the literature of tourism there is a relative dearth on the research into tourism and small business development. SMMTEs, state Cooper & Buhalis (1992), which underpin the delivery of the tourism product in most countries and are particularly important in destination development, not only providing tourists with direct contact with the character of the destination, but also facilitating the rapid infusion on tourist spending in the local economy.

The South African tourism industry, according to Rogerson (2005a), could be conceptualised as a three-tiered hierarchy of enterprises. At the top are the operations of larger, established groups of enterprises that are responsible for, amongst others, the country’s major travel and tourism retail and wholesale operations, transportation, hotels, casinos and event facilities. The largest proportion of SMMTEs, however, are found in the middle-tier of the hierarchy, which consists of SMMTEs owned by owners of predominantly European descent that operate a host of different establishments from travel and touring operations, restaurants, small hotels, self-catering and resorts, game farms, bed and breakfasts or backpacking hostels. The lowest-tier in the South African tourism economy is comprised of the emerging black-owned tourism economy, which constitutes a mix of formally registered micro-enterprises as well as a mass of informal tourism enterprises. It is, however, not clear, due to an absence of reliable statistics, what the actual shape and size of this hierarchy actually is (the number of established versus emerging SMMTEs is not
known). Recent research, as depicted in Table 1, (The DTI, 2003, and DEAT, 2007) concerning SMMTEs in South Africa has confirmed that established SMMTEs (owner-managed and employing less than 50 employees) overwhelmingly dominate the local tourism industry (Tassiopoulos, 2008):

<table>
<thead>
<tr>
<th>Industries</th>
<th>SMMTEs in Industries (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitality</td>
<td>97</td>
</tr>
<tr>
<td>Travel and tourism</td>
<td>97</td>
</tr>
<tr>
<td>Gaming and lotteries</td>
<td>89</td>
</tr>
<tr>
<td>Sport, recreation and fitness</td>
<td>98</td>
</tr>
<tr>
<td>Conservation and tourist guiding</td>
<td>89</td>
</tr>
</tbody>
</table>

In South Africa, according to the DTI (2003), lifestyle factors amongst SMMTEs are found predominantly amongst entrepreneurs of European descent who mostly own accommodation SMMTEs in the Western Cape, KwaZulu Natal (the Midlands area) and Free State provinces. In contrast, economic motives represent the basis of development of the (predominantly black-owned) emerging SMMTE economy which includes the rural areas, such as the Wild Coast in the Eastern Cape Province with many such tourism entrepreneurs operating at the barest levels of economic survival. The research findings of Szivas (2001) indicate that there are two aspects to SMMTE’s that need to be noted: the relative ease of entry into the tourism industry as many of the entrants into the tourism industry come from a wide range of industries, and, the “way of life” motives for entrepreneurial entry into tourism reveals that the industry is seen as offering a better lifestyle and a better standard of living while promising a pleasant work environment and high levels of human interaction. The study does not suggest that that experience is not required. It, however, underscores industry-specific experience as a prerequisite for success. The study
highlights the implications of this for the debate on the quality of the tourism product. SMMTEs, according to Cooper and Buhalis (1992), Buhalis and Main (1998) and Buhalis (1994), can be summarised as follows:

1. SMMTE’s are characterised by family run businesses, and are self-employed,
2. SMMTE’s have managers with few formal qualifications and limited previous experiences in tourism,
3. SMMTE’s have managers who enter the industry for a variety of reasons, not only for economic reasons,
4. Sources of capital for SMMTE’s are varied and SMMTE’s tend to have very low levels of capital investment - thus possibly impacting negatively on quality, and
5. SMMTE’s have no formalised management system.

Furthermore, according to Getz and Nilsson (2004), seasonal fluctuations in demand could be problematic for some people who rely on tourism for a living, whilst for others; seasonal closures can be a necessary component of living a traditional lifestyle or a benefit for lifestyle orientated SMMTE owners. Consequently, seasonality can adversely affect some SMMTEs, thus owners need to evaluate their goals and options carefully; the responses to seasonality should be based on the needs of the family and the SMMTE as well as the assessment of viable alternatives to off-peak-demand periods. Alternatives such as closing down the SMMTE during the off-peak period and pursuing alternative forms of income, treating the SMMTE as a secondary source of income, or accepting diminished revenue from the SMMTE could be considered.
The scope of attributes of the SMMTE owner

SMMTE owners play a central role in a venture in terms of strategic behaviour. Consequently, the SMMTE owner is an important element of this paper. SMMTE owners with a certain attribute profile (profiled in this paper in terms of knowledge, skills and attitude) have a direct bearing on the strategic behaviour that can potentially manifest within an SMMTE as a preferred strategic behaviour, and ultimately, will impact on the success or failure of an SMMTE. Timmons and Spinelli (2003), Morrison, Rimmington and Williams (1999) and Visser (2003) identify core attributes or characteristics of successful entrepreneurs. It is stated that there are “six themes” of entrepreneurial attributes as to what successful entrepreneurs “do and perform”. The six themes concerning the dominant entrepreneurial attributes are: a) commitment and determination; b) leadership; c) opportunity obsession; d) tolerance of risk, ambiguity and uncertainty; e) creativity, self-reliance and adaptability; and f) motivation to excel. It is, however, not the objective of this paper to empirically research the attributes of entrepreneurs as there are a number of studies (for example, De Coning, 1988, and Maas, 1996) that have already been completed in this regard. The central focus in this paper is to determine the possible linkages between the attributes of entrepreneurs and the preferred strategic behaviour that is manifested in SMMTEs. Consequently, the attributes of entrepreneurs, as empirically determined by De Coning (1988), as in Maas (1996), are accepted for this paper as they are congruent with the attributes that have been determined by other researchers in this field and because the De Coning study (1988) has a South African focus. It can thus be concluded from the above-mentioned discussion that there is a broad agreement amongst researchers concerning the attributes of entrepreneurs. The De Coning (1988) findings are set out in Table 2.
The various entrepreneurial attributes are briefly discussed hereunder:

i. Conceptualisation or holistic approach: this is described by De Coning (1988) as the management approach employed within an SMME by the owner. In some instances, certain owners find it adequate to only focus on effectiveness (internal environment), whilst in others instances, owners may focus on both efficiency and effectiveness (external and internal environments). Hereafter, for the purposes of this paper, this attribute is referred to as the holistic approach.

ii. Entrepreneurial growth perceptions, value systems and motivations: perceptions are noted by De Coning (1988) as referring to the various reference frameworks of owners and determine their behaviour in specific situations. Three main categories of business owner perceptions are indentified. These range from perceptions of owners who try to avoid venture bankruptcy to those owners who are characterised by a growth perception. In-
between these two continuum poles there are indications of perceptions that simultaneously include survivalist characteristics and bankruptcy avoidance characteristics. Value systems and motivations are considered synonymous concepts by De Coning (1988). The central question that needs to be answered is: what primarily motivates SMMTE owners to operate a business? There can be one or a combination of reasons, including the improvement of the financial position of the SMMTE owner; provision for the needs of the family lifestyle, need to be independent, need to excel, to actualise growth or to innovate.

iii. Locus of control: various empirical studies are noted by De Coning (1988) to have found that entrepreneurs are characterised as having an internal locus of control.

iv. Management knowledge or formal education: SMMEs are not large businesses of a small scale emphasises De Coning (1988). In large businesses, the management and operational levels are normally clearly demarcated, however this is not so in SMMEs. SMME owners are normally required to manage as well execute the operational tasks in the SMME. Thus, it is critical to determine the extent of formal management education and the various functional areas that are affected.

v. Risk propensity: risk reflects the degree of uncertainty and potential loss associated with outcomes which may follow from a given behaviour or set of behaviours (Forlani and Mullins, 2000). Basic elements of risk construction are identified: potential losses and the significance of those losses. The central issue is how entrepreneurs cope with the risks inherent in their decisions, what determines the way they perceive the riskiness of their decisions, whether they possess character traits which predispose them to engage in uncertain behaviour or whether they assess opportunities and threats differently from non-
entrepreneurs. Sitkin and Weingart (1995) and in contrast with previous researchers such as Derby and Keeney (1981) do not consider risk propensity as a stable personal attribute because risk is a cumulative tendency to take or avoid risks and can be changed as a result of experience. Successful entrepreneurs, indicate Timmons and Spinelli (2003) have a propensity to take calculated risks or avoid risk that they do not need to take.

vi. Prior work experience: De Coning (1988) indicates that two of the main reasons that SMMEs fail are due to inadequate business and management experience. The different roles that SMME owners have to fulfil also require comprehensive prior-work experience. Thus, it is critical to determine if the SMMTE owners have relevant experience related to various functional management areas of the business.

It is assumed that the entrepreneur has a direct bearing on the strategic behaviour of the SMMTE and, the consequences thereof could range in varying degrees from success to failure for the SMMTE. Furthermore, it is also assumed that preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes, which can manifest in different formats – depending on the attributes of the entrepreneurs. The extent to which SMMTE owners manifest strategic behaviour, is dependent on a multitude of variables. Some of these variables are controllable and others may be beyond the control and influence of the SMMTE owner. Controllable internal factors, according to Visser (2003), are those that are internal to the SMMTE owner, such as strategic thinking skills. This implies that SMMTE owners can learn the techniques and obtain qualities that they need for preferred strategic behaviour to manifest in their ventures. Alternatively, it can be said that SMMTE owners can become strategic leaders who inspire and stimulate their employees. Uncontrollable factors are fundamentally external variables over which the SMMTE owner has little, if any, direct influence. The state of the
economy and socio-political influences are examples of such external variables. Although proactive behaviour by SMMTE owners can result in a preferred advantage from external variables, it is proposed that the focus of the paper should rather be on the SMMTE owners themselves and the attributes that enable them to react strategically toward external variables. In regard to the internal variables, the presence of strategic behaviour is linked to co-producers of strategic behaviour within SMMTEs. The interrelationship in the form of a conceptual model is depicted in Figure 1.

![Figure 1: The a priori model for strategic behaviour of SMMTEs (Conceptual Model)](image)

*The elements of the conceptual model: a discussion*

The proposed conceptual model consists of integrating a minimum set of variables ($E_1 \ldots E_n$) characterised as the attributes of the SMMTE owners (and their businesses) and a second set of
intermediate variables (SB₁ …. SBₙ) characterised as the potential manifestations of strategic behaviour of the SMMTE owners. This relationship is depicted in Figure 1.

This paper is primarily focussed on the SMMTE owners and the potential manifestations of strategic behaviour, and, is not focussed on the attributes of the SMMTE employees. It is emphasised that SMMTE employees are not the main focus of this paper, however, this approach does not deny the possible strategic behavioural contributions of such employees. The focus is rather on the nature of SMMTE structures or processes and the behaviour of SMMTE owners who act as stimuli or agents for strategic behaviour. Consequently, the study determines the extent to which linkages can be established between the unique attributes of SMMTE owners and the manifestation of strategic behaviour. For instance, a link will have to empirically measure the individual (or set of) attributes, or characteristics, of the entrepreneurs to the characteristics that are both unique and / or typical to strategic behaviour of these SMMTE owners. The correlation of these relationships, or absence of any direct link, is based on the indicators from literature, logical conclusions and insight. The focus of the paper, thus, is primarily on the SMMTE owner and the manifestation of strategic behaviour within the SMMTE and is not focussed on the final outcomes of an SMMTE in terms of success. It is expected that the results from applying this approach will have a better probability of predicting business success.

**Strategic behaviour (IO)**

Strategic behaviour (illustrated as Intermediate Outcome in Figure 1), according to Johnson and Scholes (1997) is characterised as being highly complex in nature; involves a high degree of uncertainty in view of making decisions in a dynamic and uncertain future; demands an integrated approach to managing the venture as owners are required to be cross-functional and
have operational boundaries to deal with strategic challenges; and, strategic decisions may also involve major changes in the venture which may require decisions for planning, making the changes and the implementation thereof.

Strategic behaviour at individual and organisational level is depicted in Table 3. Strategic behaviour can, thus, be described as utilising the venture’s threats and opportunities to enhance its long-term prospects, and, a strategic decision can be defined as a set of critical actions and dynamic factors, at individual and organisational level, beginning with the identification of the stimuli and ending with the specific commitment for action. Strategic behaviour is, overall, described as unstructured, irregular and incomprehensive with SMME strategising considered as incremental, sporadic and reactive.

Table 3

<table>
<thead>
<tr>
<th>Characteristics of strategic behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual level:</strong> Holistic understanding of the SMMTE and its environment (issue identification, alternative generation, evaluation and selection). Creativity. Vision of the SMMTEs future</td>
</tr>
<tr>
<td><strong>Organisational level:</strong> Foster on-going strategic dialogue among the internal and external stakeholders (power structure, past performance and strategies, the complexity and volatility of the SMMTE). Exploit the ingenuity and creativity of employees (venture size; past strategies; performance; structure; top management team attributes; beliefs; and, the use of organisational slack.).</td>
</tr>
</tbody>
</table>

Source: Rajagopalan, Rasheed and Datta (1993), Hynes (2003) and Bonn (2001)

The paper assumes that the preferred manifestations of strategic behaviour are the end-product of a dynamic interaction between various elements that involve the SMMTE owners’ attributes and the strategic business processes that are utilised. Consequently, an investigation of the relationship between certain SMMTE owner attributes and strategic behaviour will be the basis
of this paper. It is assumed that some of the preferred strategic behaviour manifestations have a higher likelihood to translate also into preferred final outcomes.

**Final outcomes (FO)**

There are varying interpretations as to what constitutes success (classified as a Final Outcome in the conceptual model, Figure 1). There are no generally accepted lists of variables that distinguish business success from failure, according to Lussier and Corman (1995), thus negating prior research which cites different variables as contributing to success or failure. For instance, in family ventures; success could be concerned with retaining ownership within the family, maintaining a certain lifestyle, or even growing the business (Timmons & Spinelli, 2003). Consequently, due to the conceptual ambiguity of measuring success, this paper will instead focus on the relationship between the attributes of the SMMTE owners that produce strategic behaviour and the manifestation of strategic behaviour within SMMTEs (Intermediate outcomes). It will, thus, assume that if the preferred strategic behaviour is applied, it can result in a successful final outcome for the SMMTEs, as after all, as underscored by Timmons and Spinelli (2003) it is the lead entrepreneur that must be seen to be “taking charge of the success equation”.

**Environmental variables**

This paper is primarily focussed on investigating the nature of possible relationships between profile elements of the SMMTE owner and intermediate outcomes in the form of the SMMTE preferred strategic behaviour that an SMMTE will have. SMMTEs, according to Bennett (2000), cannot be divorced from the fact that the external environment impacts on the host population, the tourists and the businesses that are in the tourism system. It could be assumed, however, that within a homogenous geographical area, such as South Africa, that such influence would be
generally the same for all SMMTEs. It is, however, further noted by De Coning (1988) that the extent to which external variables impact on an SMMTE are to some extent influenced by the ability of entrepreneurs to understand the external environment.

Against this background, the paper endeavours to establish the potential linkages or relationships between the characteristics or attributes of SMMTE owners and the manifestation of strategic behaviour. The investigation of the strategic behaviour in SMMTEs with particular emphasis on determining which variables co-produce preferred manifestations of strategic behaviour in such enterprises is because the preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes which is dependant on the attributes of the entrepreneurs.

**Methodology**

**Study design**

The research design for the proposed study involved is primarily descriptive and explanatory research.

**Sample**

The target population covered all nine provinces of South Africa. In order to incorporate SMMTE’s on a national basis, the services of a commercial database company were used to compile a database of SMMTEs, caused by a dearth of workable alternatives concerning comprehensive databases of SMMTE’s in South Africa. The decision-makers of formally registered businesses (informal businesses were not included) were selected by rank (most senior person: managing director, chairperson, manager etcetera). The businesses included could be described as head offices and stand-alones employing no more than 100 staff. The researcher selected the most appropriate business types and codes associated with the tourism industry (the
so-called unit of analysis) to extract a representative national list of 1965 SMMTE’s for the purpose of this research. In total 316 questionnaires were returned which represented a total response rate of 16.08 percent, of this 168, or 8.56 percent was deemed, conservatively, to be the useable response rate.

**Research instrument**

The research instrument used was a structured questionnaire consisting of five sections. Section A of the research instrument consists of question items related to determining the demographic profile of respondents. This section of the instrument determines the geographical location; the duration of business operation, the number of branches, if any; the type of businesses, the tourism sector the businesses consider to be their core business; the number of full and part-time employees, an estimation of the number of new full-time posts the business could create within five years; an estimation of the annual gross total turnover and total gross asset value; the gender and age profile of the respondents; the highest educational level; and an indication of the population group of the respondents. Most of the said items have been derived from other instruments that have been previously validated by other researchers such as Loubser (1999), Maas (1996: 249); and Orford, Herrington and Wood (2004).

Section B of the research instrument consists of question items that have been previously validated by other researchers such as Maas (1996). Various questions were posed to the SMMTE owners concerning their personal convictions (locus of control), incidence of formal education in the management fields, experience in the management fields, practical/technical experience relevant to the workplace, risk propensity, reasons provided as to why people started their own business, decisions that influence the business, common challenges and various approaches to address these factors.
Sections C and D of the research instrument consists of question items that are intended to measure the strategic behaviour dimensions at organisational and individual levels of the strategic behaviour construct.

**Results**

<table>
<thead>
<tr>
<th>Table 4</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary of the business characteristics of SMMTEs in the sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key business characteristics</strong></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>More than 42 months (or 3.5 years) in operation</td>
<td>146</td>
<td>86.9%</td>
</tr>
<tr>
<td>No branches, other than the main business</td>
<td>133</td>
<td>79.2%</td>
</tr>
<tr>
<td>Private company (Pty) Ltd registered</td>
<td>63</td>
<td>37.7%</td>
</tr>
<tr>
<td>Are family businesses</td>
<td>95</td>
<td>57.6%</td>
</tr>
<tr>
<td>Operate in the accommodation and catering sector</td>
<td>103</td>
<td>61.3%</td>
</tr>
<tr>
<td>Employ 10 to 49 full-time staff</td>
<td>75</td>
<td>45.2%</td>
</tr>
<tr>
<td>Expect to employ an additional 10 to 49 full-time employees within the next five-year period</td>
<td>46</td>
<td>28.8%</td>
</tr>
<tr>
<td>Employ up to 4 part-time employees per annum</td>
<td>67</td>
<td>40.1%</td>
</tr>
<tr>
<td>Estimated total gross turnover of between R1 million and R5 million</td>
<td>63</td>
<td>39.6%</td>
</tr>
<tr>
<td>Estimated total gross asset value of more than R1.5 million (excluding fixed property)</td>
<td>64</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Demographic characteristics**

The typical demographic profile of the SMMTEs can be characterised as follows: the majority of respondents can be demographically characterised as originating from the Western Cape (28.7%) and Gauteng (26.2%); are most likely based in an urban/municipal area; are most likely (28.6%) 45 to 54 years of age; most likely (70.5%) of the male gender; the highest number have attained a Grade 12 (33.5%) qualification; and, the majority (85.9%) can be classified as being from the White population group. The profile of this study compares favourably with that of the South African SMMTE profile provided by THETA (2009a).
**Business characteristics**

The typical business characteristics of the SMMTEs included in the study are summarised in Table 4.

**The typical attributes of the SMMTEs**

The typical attributes of the SMMTE owners in the study suggest the following: the majority of owners have an internal locus of control; many have almost no formal management education in all the functional management areas and the largest proportion have received management functional education in only two functional areas; many have almost no prior-experience in all functional management areas and the largest proportion have some prior-experience in three of the functional management area; however, a large proportion indicated appropriate technical competence for the operations of their business and almost half of the respondents indicted three entrepreneurial reasons for starting a business but a small proportion did indicate no entrepreneurial reason for starting their businesses; the majority of owners indicated a tendency toward risk aversion and thus were deemed non-entrepreneurial for the purpose of this study; and lastly, the holistic capabilities of the respondents indicate an internal approach was dominant within these SMMTEs and were, thus, also deemed non-entrepreneurial for the purpose of this study.

The study then stated the main research hypothesis, along with its set of sub-hypotheses, and then proceeded to investigate a possible relationship between strategic behaviour (the dependent variable) and entrepreneurial attributes (independent variables) using inferential statistics. Although the research hypotheses of this study are implicitly stated through the *a priori* model, as depicted in Figure 1, to assist with data analysis objective of this paper, only the main research hypothesis is stated hereafter:
Null Hypothesis ($H_0$) = There is no association between the owner attributes of the SMMTEs (that are characterised by locus of control, reasons for starting a business, holistic capabilities, propensity to risk, formal management education and prior-experience) and preferred strategic behaviour.

Alternative Hypothesis ($H_1$) = There is an association between the owner attributes of the SMMTEs (that are characterised by locus of control, reasons for starting a business, holistic capabilities, propensity to risk, formal management education and prior-experience) and preferred strategic behaviour.

The relationships and constructs, as depicted in the a priori model, were empirically tested through the means of various statistical techniques:

- Reliability testing of the data set was conducted.
- Validity of the research instrument was determined.
- Reliability of the new constructs after exploratory factor analysis was determined.
- The relationships between the variables of the hypotheses were tested through Spearman’s rho and ANOVA.
- The relationships between the variables of the hypotheses were tested, further, through regression analysis.

A summary of the associations between the variables (ref. Table 5) revealed the overall significant associations concerning the selected attributes of venture owners and the potential manifestations of strategic behaviour within the SMMTEs. This was determined after the data had been subjected to the Spearman’s rank-order correlation coefficient (Spearman $\rho$), ANOVA and multiple regression analyses.
<table>
<thead>
<tr>
<th>Sub-Hypothesis</th>
<th>Spearman’s Rank-Order Correlation Coefficient (Spearman’s ρ) and ANOVA</th>
<th>Regression analysis</th>
<th>Statistically significant results of Spearman’s ρ and regression analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. internal locus of control</td>
<td>holistic understanding (0.17), vision (0.18), fostering strategic dialogue (0.16), and, gathering and sharing market intelligence (0.17)</td>
<td>exploit ingenuity; vision; foster strategic dialogue; planning focus; gathering and sharing market intelligence</td>
<td>Vision; Foster strategic dialogue; Gathering and sharing market intelligence;</td>
</tr>
<tr>
<td>2: formal education</td>
<td>holistic understanding (0.23), fostering strategic dialogue (0.33), planning focus (0.35), task environment awareness (0.22), and, gathering and sharing market intelligence (0.17)</td>
<td>exploit ingenuity; foster strategic dialogue; planning focus; task environment awareness</td>
<td>Foster strategic dialogue; Task environment awareness</td>
</tr>
<tr>
<td>3: prior-work experience</td>
<td>holistic understanding (0.18), fostering strategic dialogue (0.19), planning focus (0.21) and, gathering and sharing market intelligence (0.17)</td>
<td>vision; gathering and sharing market intelligence</td>
<td>Gathering and sharing market intelligence</td>
</tr>
<tr>
<td>4: entrepreneurial reasons for starting a business</td>
<td>exploiting ingenuity (0.22), holistic understanding (0.24), creativity (0.21), vision (0.25), fostering strategic dialogue (0.27), planning focus (0.24), synergistic business development (0.33) and, task environment awareness (0.33)</td>
<td>synergistic business development; task environment awareness</td>
<td>Synergistic business development; Task environment awareness</td>
</tr>
<tr>
<td>5: holistic profiles</td>
<td>exploiting ingenuity (0.29), holistic understanding (0.26), creativity (0.19), vision (0.19), fostering strategic dialogue (0.32), planning focus (0.33), synergistic business development (0.21) task environment awareness (0.19), and, gathering and sharing market intelligence (0.24)</td>
<td>exploit ingenuity; holistic understanding; vision; foster strategic dialogue; planning focus, creativity</td>
<td>Exploit ingenuity; Holistic understanding; Vision; Foster strategic dialogue; Planning focus, Creativity</td>
</tr>
<tr>
<td>6: risk-seeking propensity</td>
<td>holistic understanding; planning focus; task environment awareness. (ref. Table 7.6.4 - ANOVA results)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Discussion of findings**

The study noted that a number of the sub-dimension elements of the strategic behaviour construct (ref. Table 5) were identified as having no (overall) statistically significant relationship with the
identified attributes of the venture owners. The study identified, as summarised in Table 5, the following significant end-results of the interaction that involves SMMTE owner attributes and the manifestations of strategic behaviour:

i. The **internal locus of control** owner attribute seemingly affects the strategic behaviour of SMMTE owners as to how they perceive the **vision** of their businesses, how they foster **strategic dialogue** within their ventures, and how they enact the **gathering and sharing of market intelligence** for their businesses.

ii. The **formal education** owner attribute seemingly fosters **strategic dialogue** with all their key stakeholders and contributes towards the improved **task environment awareness** within SMMTEs.

iii. The **prior-experience** owner attribute of SMMTE owners seemingly enables the strategic behaviour of SMMTE owners towards an improved **gathering and sharing market intelligence** that is used by SMMTEs.

iv. The **entrepreneurial reasons for starting a business** owner attribute seemingly motivates the strategic behaviour of SMMTE owners to **synergise business development** activities and contribute towards the improved **task environment awareness** of their businesses.

v. The **holistic profiles** owner attribute seemingly affects the strategic behaviour of SMMTE owners through enabling them to perceive the **holistic understanding** of their businesses; engendering the **vision** formulation of their businesses; **fostering strategic dialogue**; developing a **planning focus**, and encouraging **creativity** within SMMTEs.

vi. The **risk-seeking (propensity) profile** owner attribute seemingly **does not have an overall**
affect on the strategic behaviour of SMMTE owners in conducting the affairs of their businesses.

![Diagram](image)

**Figure 2: The populated *a priori* theoretical model and its statistically significant associations**

The study did, however, find statistically significant results of the Spearman’s ρ and regression analyses, as depicted in Table 5, between some of the attributes of the owners and certain elements of strategic behaviour. These results (ref. Table 5) were used to populate the *a priori*
theoretical model and are depicted in Figure 2 (ref. intermediate outcomes).

Although the research hypothesis of this study is implicitly stated through the a priori model, as depicted in Figure 2, the research findings provide support that there is an ultimately statistically significant association between the independent and dependent variables, and that the alternative hypothesis can be accepted, namely, there is an association between the specific attributes of the owners of the SMMTEs (which is characterised by locus of control, reasons for starting a business, holistic capabilities, formal management education and prior-experience) and the selected strategic behaviour variables. Furthermore, the research findings provide support that there is an overall statistically significant association between the various independent and dependent variables, as stated by the sub-hypotheses, and that the following alternative sub-hypotheses, can be accepted, namely:

i. There is a positive relationship between locus of control and strategic behaviour.

ii. There is a positive relationship between management education and strategic behaviour.

iii. There is a positive relationship between prior-management experience and strategic behaviour.

iv. There is a positive relationship between entrepreneurial reasons for starting a business and strategic behaviour.

v. There is a positive relationship between greater holistic capabilities and strategic behaviour.

However, the research findings do not provide support that there is an overall statistically significant association between the risk propensity independent variable and the strategic behaviour dependent variables and, consequently, the following null sub-hypothesis is accepted: the risk-seeking profile owner attribute seemingly does not have an overall effect on the strategic
behaviour of SMMTE owners in conducting the strategic affairs of their businesses. This may be indicative of SMMTE owners not aspiring to grow their businesses (namely, have capped growth motives), and, are often motivated by non-financial considerations, such as lifestyle (including familial) factors, when starting and managing their SMMTEs. This has a direct implication on the varying levels of strategic behaviour evidenced within the SMMTEs, and consequently, the study postulates that SMMTE owners employ a risk-avoidance profile when formulating strategic behaviour.

The populated conceptual (or, \textit{a priori}) model and its sub-components, depicted in Figure 2, focused primarily on the two main constructs: the attributes of an SMMTE owner and preferred strategic behaviour variables that is manifested within an SMMTE. The study focused on analysing the association between specific attributes of the SMMTE owners that produce preferred strategic behaviour and the manifestation of preferred strategic behaviour within SMMTEs (Intermediate outcomes). The study assumes that certain preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes, which can manifest in different formats – success or failure.

\textbf{Recommendations and conclusion}

This study examined the determinants of strategic behaviour through the use of a sample frame of SMMTEs owners in the formal tourism industry of South Africa. It is assumed that in cases where strategic behaviour manifests in SMMTEs, that there should be a higher likelihood of successful outcomes (and conversely, failure where strategic behaviour does not manifest in SMMTEs) for such SMMTEs. The importance of successful SMMTEs as a mechanism for job creation, innovation and long-term sustainable economic development, for a developing country economy such as South Africa can not be emphasised enough.
To ensure long-term sustainability, notes Whittle (2000), the owners of SMMTEs need to make efficient and effective business decisions about the internal and external threats and challenges their businesses face to ensure that they have enough strategic information to make decisions and maintain their competitive advantage in the tourism industry. Crijns and Ooghe (1996) indicate that, in general, it can be viewed that the development and growth of SMMEs can be attributed toward how quickly the entrepreneur, the business team and organisation can adapt and learn from their experiences in combination with the external and internal environments. This implies that the core elements of strategic behaviour are internal and external and, according to Hofer (1991), should include market-related, industry-related, competitor-related, supplier-related, resource- and capability related, and broader environmental-related strategic challenges.

The practical recommendations indicated in this section are derived from the summary of the relationships between specific SMMTE entrepreneurial attributes and selected strategic behaviour variables, as depicted in Figure 2. In terms of the said theoretical model, strategic behaviour can be developed at two main levels: the individual level and the organisational level.

**Individual level**

The study found that the independent variables were overall not good (statistically significant) predictors of strategic behaviour of SMMTE owners. The study, further, found however, that statistically significant associations between the owners’ attributes (independent variable) and a number of sub-dimensions of strategic behaviour (dependent) variables as depicted in Figure 2 exist.

The study noted the findings of the descriptive statistics which indicated that the majority of respondents in this study had mostly entrepreneurial reasons for starting their businesses.
Agencies involved with SMMTE development need to assess more the **entrepreneurial attributes** of aspiring tourism entrepreneurs who want to start an SMMTE, as this has a direct bearing on the strategic behaviour that such ventures will evidence, and which can ultimately impact on their growth orientation (capped-to growth-directed) and sustainability. This study proposes the provision of strategic behavioural skills to be included as part of the entrepreneurship programmes of schools and universities so as to enhance the entrepreneurial attributes of aspirant tourism entrepreneurs. It is suggested that the entrepreneurial reasons for starting an SMMTE can contribute towards the development of synergistic business developments through putting together business projects that contribute towards business sustainability; and, will contribute towards improved task environment awareness within the SMMTE in order to ensure that business projects are completed as profit-effectively as possible.

The study found that a good predictor of strategic behaviour is the **formal education** that SMMTE owners receive which in turn has a direct bearing on the strategic behaviour that such ventures will evidence; and ultimately their sustainability. The findings of this study, however, show that the descriptive statistics noted that the majority of respondents in this study had no formal management education with only a small minority having receiving formal education in all management functional areas. It is recommended that learning opportunities be provided for applied learning in all management functional areas and that such education should not only include the “hard science” of business plan writing but must also deal with the “soft science” of developing strategic thinking and behaviour competencies of SMMTE owners. Such learning opportunities should also be firmly grounded in the tourism discipline. It is suggested that improved (also implying appropriate) formal education can significantly contribute towards fostering and supporting strategic dialogue with the SMMTE stakeholders; and will contribute
towards improved task environment awareness within the SMMTEs. Fletcher and Harris (2002: 307) indicate that “entrepreneurship education should rather concentrate on the process rather than on the content, with how to aspects being more important than know how”. It is emphasised by Bolton and Thompson (2004) that entrepreneurs “learn by doing” and may need a coach to promote the learning process. Thus, education is needed to be “hands-on” rather than “talk about” but owners also need to accept that they need “mentoring”. It is further indicated by De Coning (1995: 8) that SMME owners should become “business literate” through upgrading their knowledge skills in respect of general management, finance, marketing and the management of people as these are considered to be necessary “entry level” abilities for entrepreneurs. The descriptive results of this study further indicated that the majority of SMMTE owners had received no formal education in strategic management and tourism business studies.

The **internal locus of control** attribute is a good predictor of strategic behaviour and it is suggested that SMMTE owners need to develop this attribute further so as not feel disempowered due to the various macro-environmental issues that may be impacting on the operation of their ventures and which may be beyond their control. It is suggested that an improved internal locus of control can contribute towards the formulation of more appropriate (even far-reaching) visions; will tend to foster strategic dialogue with stakeholders; and will contribute towards the improved gathering and sharing of market intelligence. It is, in addition, proposed that SMMTE owners be provided with strategic business support and education to the point where they can depend on their own skill (internal locus of control) and will, thus, be more likely to work harder and improve their strategic abilities to manage their businesses. The descriptive results of this study further indicated that the majority of SMMTE owners had an internal locus of control.

**Prior-experience** has also been identified as a good predictor of strategic behaviour. This is
indicative of the need for prospective SMMTE owners to first gain appropriate prior-experience through working in the tourism industry before establishing their own SMMTE. The results suggest that the experience gained in this way impacts on the type of strategic behaviour that is evidenced within SMMTEs. It is suggested that prior-experience can contribute towards the improved gathering and sharing of market intelligence supposedly because appropriately experienced SMMTE owners know how to operate in a networked tourism industry and have experience in dealing with its idiosyncrasies. It is noted, however, that the findings of the descriptive statistics bear evidence that the majority of respondents in this study had prior-management experience in at least three of the management functional areas with an almost equal number having no prior-experience in any of the management functional areas. It is suggested that because of the different (even non-tourism) management backgrounds from which many of the SMMTE owners have gained their prior-experience, there is need to acknowledge and address this through possibly teaming-up entrepreneurs with SMMTE entrepreneurs who have the relevant prior-experience (possibly, in the form of mentor-mentee networks).

The **holistic** attribute of successful SMMTE owners is a good predictor of strategic behaviour because it leads to the ability to take a holistic view of the SMMTE and its environment. This implies an understanding of the different problems and issues, and how they influence the SMMTE. It is suggested that the holistic attribute of SMMTE owners can contribute towards the formulation of more appropriate (even far-reaching) visions; exploiting ingenuity, encouraging a planning focus, engendering creativity, fostering strategic dialogue with stakeholders; and will contribute towards the improved gathering and sharing of market intelligence. It is noted, however, in the findings of the descriptive statistics that the majority of respondents in this study had an internal approach when conducting their business. Consequently, there is need to develop
the ability of SMMTE owners to have holistic ability that includes external factors when conducting their business behaviour because it leads to the ability to take a holistic view of the SMMTE including the environment in which it is situated.

The research findings indicated that the **risk-seeking behaviour** attribute of SMMTE owners is not a good predictor of strategic behaviour. The descriptive research findings of this study also indicate that most SMMTEs avoid risk when conducting their business. It would, thus, be prudent of agencies involved in SMMTE development to take cognisance of the risk avoidance strategies of most SMMTEs in the process of designing interventions to assist aspiring SMMTEs so as to ensure the sustainability of these ventures. This is indicative of SMMTE owners who seemingly are not motivated to grow their businesses (namely, have capped growth motives), and are often motivated by non-financial considerations, such as lifestyle (including familial) factors, when starting and managing their SMMTEs. As indicated, the predominance of middle-aged respondents in the study may further reflect a trend towards semi-retirement and subsequent self-employment, and thus the tendency to be more risk-averse.

Finally, the blending of strategic thinking and planning together is a learned practice. The whole purpose of strategy is to create business advantage, to maximise resources, decisions and core competencies. Strategic thinking seems to emphasise the formulation of strategy within the organisation and strategically plan the implementation of these strategies. In an SMMTE scenario, the synergistic effect of both elements operating together is what is required, and quite often strategies for the SMMTE require implementation and action at the same time. The extent to which SMMTE owners manifest strategic behaviour, however, is dependent on a multitude of variables. Some of these variables which are internal to the SMMTE owner, such as strategic thinking skills, are controllable but others may be beyond the control and influence of the
SMMTE owner. Uncontrollable factors were fundamentally external variables over which the SMMTE owner has little, if any, direct influence. The state of the economy and socio-political influences were examples of such external variables. However, the extent of the SMMTEs ability to understand the external environment could affect the influence of the external variables on the performance of the SMMTE.

Organisational level

SMMTEs owners should create a business climate whereby it is conducive towards supporting the creative strategic act within the entire enterprise. SMMTEs should also draw from the entire SMMTE talent pool because the most effective strategic entrepreneurial behaviour sometimes originates from individuals or teams whose input was not expected. It can be further emphasised that SMMTEs should promote divergent thinking, the generation of different views, within the enterprises which should result in creative and strategic behaviour.

Although macro environmental factors do impact on the strategic behaviour of SMMTEs, the plethora of SMMTEs operating within tourism destinations means that they have the potential to strategically influence the environmental, social and economic (triple bottom line) progress towards achieving sustainability within such destinations. The sustainable development of destinations places SMMTEs in the centre of sustainability debates as they have the potential to form strategic networks and spread the environmental, social and economic benefits within their destinations. This implies that measureable sustainability indicators need to be developed for SMMTEs and that further research that measures the interaction between sustainability, strategic behaviour and strategic networks needs to be conducted.

Strategic behaviour, recommends Grundy and Brown (2002), is a habit that SMMTE owners
should continually cultivate. Such behaviour should include devoting time regularly to engage with the strategic issues of the SMMTE; focussing on one strategic issue at a time; using ad hoc free time to work on strategic issues; gathering small, but rich, data from the key stakeholders (clients, competitors, staff, etc.); and to be confident of their ability to think strategically. This will assist with translating strategic behaviour imperatives into practice.

Acknowledgements

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References


INVESTIGATING STRATEGIC BEHAVIOUR IN SMALL, MICRO AND MEDIUM TOURISM ENTERPRISES IN SOUTH AFRICA

Dimitri Tassiopoulos¹, Tobie De Coning² and Eon Smit³

Abstract

The South African small, micro and medium tourism enterprises (SMMTE) sector faces numerous challenges. To ensure long-term sustainability the owners of SMMTEs need to make efficient and effective strategic business decisions about the internal and external threats and challenges their businesses face. The paper explores the potential dynamic interrelationships between profile attributes and preferred strategic behaviour of SMMTEs. The results provide important guidelines for interventions aimed at optimising the behaviour of these enterprises and, in so doing, to enhance the probability that they will be sustainable and successful. Important insights are gained on these enterprises and their owner operators, which account for a major part of South Africa's developing tourism sector. In an international context the paper also makes a contribution to the body of knowledge concerning this important economic sub-sector.

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JSBM Research Area: 3. Small Business Strategy and Organization

Introduction

In 1994, with the end of apartheid, the South African government undertook to make tourism one of the country’s leading industries in the creation of employment and the generation of foreign
income (Tassiopoulos, 2008). Although the tourism industry has some large organisations, the sector is numerically dominated by SMMTEs, according to Szivas (2001), Kirsten and Rogerson (2002), and Cooper and Buhalis (1992), yet in the literature of tourism there is a relative dearth on the research into tourism and small business development. SMMTEs, state Cooper & Buhalis (1992), which underpin the delivery of the tourism product in most countries and are particularly important in destination development, not only providing tourists with direct contact with the character of the destination, but also facilitating the rapid infusion on tourist spending in the local economy.

The South African tourism industry, according to Rogerson (2005a), could be conceptualised as a three-tiered hierarchy of enterprises. At the top are the operations of larger, established groups of enterprises that are responsible for, amongst others, the country’s major travel and tourism retail and wholesale operations, transportation, hotels, casinos and event facilities. The largest proportion of SMMTEs, however, are found in the middle-tier of the hierarchy, which consists of SMMTEs owned by owners of predominantly European descent that operate a host of different establishments from travel and touring operations, restaurants, small hotels, self-catering and resorts, game farms, bed and breakfasts or backpacking hostels. The lowest-tier in the South African tourism economy is comprised of the emerging black-owned tourism economy, which constitutes a mix of formally registered micro-enterprises as well as a mass of informal tourism enterprises. It is, however, not clear, due to an absence of reliable statistics, what the actual shape and size of this hierarchy actually is (the number of established versus emerging SMMTEs is not known). Recent research, as depicted in Table 1, (The DTI, 2003, and DEAT, 2007) concerning SMMTEs in South Africa has confirmed that established SMMTEs (owner-managed and
employing less than 50 employees) overwhelmingly dominate the local tourism industry (Tassiopoulos, 2008):

Table 1

<table>
<thead>
<tr>
<th>Industries</th>
<th>SMMTEs in Industries (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitality</td>
<td>97</td>
</tr>
<tr>
<td>Travel and tourism</td>
<td>97</td>
</tr>
<tr>
<td>Gaming and lotteries</td>
<td>89</td>
</tr>
<tr>
<td>Sport, recreation and fitness</td>
<td>98</td>
</tr>
<tr>
<td>Conservation and tourist guiding</td>
<td>89</td>
</tr>
</tbody>
</table>

In South Africa, according to the DTI (2003), lifestyle factors amongst SMMTEs are found predominantly amongst entrepreneurs of European descent who mostly own accommodation SMMTEs in the Western Cape, KwaZulu Natal (the Midlands area) and Free State provinces. In contrast, economic motives represent the basis of development of the (predominantly black-owned) emerging SMMTE economy which includes the rural areas, such as the Wild Coast in the Eastern Cape Province with many such tourism entrepreneurs operating at the barest levels of economic survival. The research findings of Szivas (2001) indicate that there are two aspects to SMMTE’s that need to be noted: the relative ease of entry into the tourism industry as many of the entrants into the tourism industry come from a wide range of industries, and, the “way of life” motives for entrepreneurial entry into tourism reveals that the industry is seen as offering a better lifestyle and a better standard of living while promising a pleasant work environment and high levels of human interaction. The study does not suggest that that experience is not required. It, however, underscores industry-specific experience as a prerequisite for success. The study highlights the implications of this for the debate on the quality of the tourism product. SMMTEs,
according to Cooper and Buhalis (1992), Buhalis and Main (1998) and Buhalis (1994), can be summarised as follows:

1. SMMTE’s are characterised by family run businesses, and are self-employed,
2. SMMTE’s have managers with few formal qualifications and limited previous experiences in tourism,
3. SMMTE’s have managers who enter the industry for a variety of reasons, not only for economic reasons,
4. Sources of capital for SMMTE’s are varied and SMMTE’s tend to have very low levels of capital investment - thus possibly impacting negatively on quality, and
5. SMMTE’s have no formalised management system.

Furthermore, according to Getz and Nilsson (2004), seasonal fluctuations in demand could be problematic for some people who rely on tourism for a living, whilst for others; seasonal closures can be a necessary component of living a traditional lifestyle or a benefit for lifestyle orientated SMMTE owners. Consequently, seasonality can adversely affect some SMMTEs, thus owners need to evaluate their goals and options carefully; the responses to seasonality should be based on the needs of the family and the SMMTE as well as the assessment of viable alternatives to off-peak-demand periods. Alternatives such as closing down the SMMTE during the off-peak period and pursuing alternative forms of income, treating the SMMTE as a secondary source of income, or accepting diminished revenue from the SMMTE could be considered.
**The scope of attributes of the SMMTE owner**

SMMTE owners play a central role in a venture in terms of strategic behaviour. Consequently, the SMMTE owner is an important element of this paper. SMMTE owners with a certain attribute profile (profiled in this paper in terms of knowledge, skills and attitude) have a direct bearing on the strategic behaviour that can potentially manifest within an SMMTE as a preferred strategic behaviour, and ultimately, will impact on the success or failure of an SMMTE. Timmons and Spinelli (2003), Morrison, Rimmington and Williams (1999) and Visser (2003) identify core attributes or characteristics of successful entrepreneurs. It is stated that there are “six themes” of entrepreneurial attributes as to what successful entrepreneurs “do and perform”. The six themes concerning the dominant entrepreneurial attributes are: a) commitment and determination; b) leadership; c) opportunity obsession; d) tolerance of risk, ambiguity and uncertainty; e) creativity, self-reliance and adaptability; and f) motivation to excel. **It is, however, not the objective of this paper to empirically research the attributes of entrepreneurs as there are a number of studies (for example, De Coning, 1988, and Maas, 1996) that have already been completed in this regard.** The central focus in this paper is to determine the possible linkages between the attributes of entrepreneurs and the preferred strategic behaviour that is manifested in SMMTEs. **Consequently, the attributes of entrepreneurs, as empirically determined by De Coning (1988), as in Maas (1996), are accepted for this paper as they are congruent with the attributes that have been determined by other researchers in this field and because the De Coning study (1988) has a South African focus.** It can thus be concluded from the above-mentioned discussion that there is a broad agreement amongst researchers concerning the attributes of entrepreneurs. The De Coning (1988) findings are set out in Table 2.
Table 2

Attitudes, knowledge and skills of entrepreneurs

<table>
<thead>
<tr>
<th>Theme</th>
<th>Preferred attributes and skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualisation/ holistic approach</td>
<td>Notices critical trends; stay in touch with the needs of customers; evaluates the behaviour of competitors.</td>
</tr>
<tr>
<td>Entrepreneurial growth perception; value system and motivation</td>
<td>The degree that a person is driven by a growth perception versus being driven by a perception to retain individual ownership at all costs. The person also contributes toward economic growth and development; to be successful; to be creative through the utilisation of opportunities in a unique manner.</td>
</tr>
<tr>
<td>Formal education</td>
<td>Has general management education.</td>
</tr>
<tr>
<td>Locus of control</td>
<td>Has internal locus of control.</td>
</tr>
<tr>
<td>Risk propensity</td>
<td>The degree to which an individual is willing to take calculated risks (versus, being on the other extreme, totally risk averse and not being prepared to make risky decisions).</td>
</tr>
<tr>
<td>Technical skills and experience</td>
<td>Has appropriate technical skills and experience.</td>
</tr>
</tbody>
</table>

Source: adapted from Maas (1996)

The various entrepreneurial attributes are briefly discussed hereunder:

i. Conceptualisation or holistic approach: this is described by De Coning (1988) as the management approach employed within an SMME by the owner. In some instances, certain owners find it adequate to only focus on effectiveness (internal environment), whilst in others instances, owners may focus on both efficiency and effectiveness (external and internal environments). Hereafter, for the purposes of this paper, this attribute is referred to as the holistic approach.

ii. Entrepreneurial growth perceptions, value systems and motivations: perceptions are noted by De Coning (1988) as referring to the various reference frameworks of owners and determine their behaviour in specific situations. Three main categories of business owner perceptions are indentified. These range from perceptions of owners who try to avoid venture bankruptcy to those owners who are characterised by a growth perception. In-
between these two continuum poles there are indications of perceptions that simultaneously include survivalist characteristics and bankruptcy avoidance characteristics. Value systems and motivations are considered synonymous concepts by De Coning (1988). The central question that needs to be answered is: what primarily motivates SMMTE owners to operate a business? There can be one or a combination of reasons, including the improvement of the financial position of the SMMTE owner; provision for the needs of the family lifestyle, need to be independent, need to excel, to actualise growth or to innovate.

iii. Locus of control: various empirical studies are noted by De Coning (1988) to have found that entrepreneurs are characterised as having an internal locus of control.

iv. Management knowledge or formal education: SMMEs are not large businesses of a small scale emphasises De Coning (1988). In large businesses, the management and operational levels are normally clearly demarcated, however this is not so in SMMEs. SMME owners are normally required to manage as well execute the operational tasks in the SMME. Thus, it is critical to determine the extent of formal management education and the various functional areas that are affected.

v. Risk propensity: risk reflects the degree of uncertainty and potential loss associated with outcomes which may follow from a given behaviour or set of behaviours (Forlani and Mullins, 2000). Basic elements of risk construction are identified: potential losses and the significance of those losses. The central issue is how entrepreneurs cope with the risks inherent in their decisions, what determines the way they perceive the riskiness of their decisions, whether they possess character traits which predispose them to engage in uncertain behaviour or whether they assess opportunities and threats differently from non-
entrepreneurs. Sitkin and Weingart (1995) and in contrast with previous researchers such as Derby and Keeney (1981) do not consider risk propensity as a stable personal attribute because risk is a cumulative tendency to take or avoid risks and can be changed as a result of experience. Successful entrepreneurs, indicate Timmons and Spinelli (2003) have a propensity to take calculated risks or avoid risk that they do not need to take.

vi. Prior work experience: De Coning (1988) indicates that two of the main reasons that SMMEs fail are due to inadequate business and management experience. The different roles that SMME owners have to fulfil also require comprehensive prior-work experience. Thus, it is critical to determine if the SMMTE owners have relevant experience related to various functional management areas of the business.

It is assumed that the entrepreneur has a direct bearing on the strategic behaviour of the SMMTE and, the consequences thereof could range in varying degrees from success to failure for the SMMTE. Furthermore, it is also assumed that preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes, which can manifest in different formats – depending on the attributes of the entrepreneurs. The extent to which SMMTE owners manifest strategic behaviour, is dependent on a multitude of variables. Some of these variables are controllable and others may be beyond the control and influence of the SMMTE owner. Controllable internal factors, according to Visser (2003), are those that are internal to the SMMTE owner, such as strategic thinking skills. This implies that SMMTE owners can learn the techniques and obtain qualities that they need for preferred strategic behaviour to manifest in their ventures. Alternatively, it can be said that SMMTE owners can become strategic leaders who inspire and stimulate their employees. Uncontrollable factors are fundamentally external variables over which the SMMTE owner has little, if any, direct influence. The state of the
economy and socio-political influences are examples of such external variables. Although proactive behaviour by SMMTE owners can result in a preferred advantage from external variables, it is proposed that the focus of the paper should rather be on the SMMTE owners themselves and the attributes that enable them to react strategically toward external variables. In regard to the internal variables, the presence of strategic behaviour is linked to co-producers of strategic behaviour within SMMTEs. The interrelationship in the form of a conceptual model is depicted in Figure 1.

![Diagram of the conceptual model](image)

**Figure 1: The a priori model for strategic behaviour of SMMTEs (Conceptual Model)**

*The elements of the conceptual model: a discussion*

The proposed conceptual model consists of integrating a minimum set of variables (E₁ … Eₙ) characterised as the attributes of the SMMTE owners (and their businesses) and a second set of
intermediate variables (SB₁ …. SBₙ) characterised as the potential manifestations of strategic behaviour of the SMMTE owners. This relationship is depicted in Figure 1.

This paper is primarily focussed on the SMMTE owners and the potential manifestations of strategic behaviour, and, is not focussed on the attributes of the SMMTE employees. It is emphasised that SMMTE employees are not the main focus of this paper, however, this approach does not deny the possible strategic behavoural contributions of such employees. The focus is rather on the nature of SMMTE structures or processes and the behaviour of SMMTE owners who act as stimuli or agents for strategic behaviour. Consequently, the study determines the extent to which linkages can be established between the unique attributes of SMMTE owners and the manifestation of strategic behaviour. For instance, a link will have to empirically measure the individual (or set of) attributes, or characteristics, of the entrepreneurs to the characteristics that are both unique and / or typical to strategic behaviour of these SMMTE owners. The correlation of these relationships, or absence of any direct link, is based on the indicators from literature, logical conclusions and insight. The focus of the paper, thus, is primarily on the SMMTE owner and the manifestation of strategic behaviour within the SMMTE and is not focussed on the final outcomes of an SMMTE in terms of success. It is expected that the results from applying this approach will have a better probability of predicting business success.

**Strategic behaviour (IO)**

Strategic behaviour (illustrated as Intermediate Outcome in Figure 1), according to Johnson and Scholes (1997) is characterised as being highly complex in nature; involves a high degree of uncertainty in view of making decisions in a dynamic and uncertain future; demands an integrated approach to managing the venture as owners are required to be cross-functional and
have operational boundaries to deal with strategic challenges; and, strategic decisions may also involve major changes in the venture which may require decisions for planning, making the changes and the implementation thereof.

Strategic behaviour at individual and organisational level is depicted in Table 3. Strategic behaviour can, thus, be described as utilising the venture’s threats and opportunities to enhance its long-term prospects, and, a strategic decision can be defined as a set of critical actions and dynamic factors, at individual and organisational level, beginning with the identification of the stimuli and ending with the specific commitment for action. Strategic behaviour is, overall, described as unstructured, irregular and incomprehensive with SMME strategising considered as incremental, sporadic and reactive.

Table 3

<table>
<thead>
<tr>
<th>Characteristics of strategic behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual level:</strong></td>
</tr>
<tr>
<td>Holistic understanding of the SMMTE and its environment (issue identification, alternative generation, evaluation and selection).</td>
</tr>
<tr>
<td>Creativity.</td>
</tr>
<tr>
<td>Vision of the SMMTEs future</td>
</tr>
<tr>
<td><strong>Organisational level:</strong></td>
</tr>
<tr>
<td>Foster on-going strategic dialogue among the internal and external stakeholders (power structure, past performance and strategies, the complexity and volatility of the SMMTE).</td>
</tr>
<tr>
<td>Exploit the ingenuity and creativity of employees (venture size; past strategies; performance; structure; top management team attributes; beliefs; and, the use of organisational slack.).</td>
</tr>
</tbody>
</table>

Source: Rajagopalan, Rasheed and Datta (1993), Hynes (2003) and Bonn (2001)

The paper assumes that the preferred manifestations of strategic behaviour are the end-product of a dynamic interaction between various elements that involve the SMMTE owners’ attributes and the strategic business processes that are utilised. Consequently, an investigation of the relationship between certain SMMTE owner attributes and strategic behaviour will be the basis of
this paper. It is assumed that some of the preferred strategic behaviour manifestations have a higher likelihood to translate also into preferred final outcomes.

**Final outcomes (FO)**

There are varying interpretations as to what constitutes success (classified as a Final Outcome in the conceptual model, Figure 1). There are no generally accepted lists of variables that distinguish business success from failure, according to Lussier and Corman (1995), thus negating prior research which cites different variables as contributing to success or failure. For instance, in family ventures; success could be concerned with retaining ownership within the family, maintaining a certain lifestyle, or even growing the business (Timmons & Spinelli, 2003). Consequently, due to the conceptual ambiguity of measuring success, this paper will instead focus on the relationship between the attributes of the SMMTE owners that produce strategic behaviour and the manifestation of strategic behaviour within SMMTEs (Intermediate outcomes). It will, thus, assume that if the preferred strategic behaviour is applied, it can result in a successful final outcome for the SMMTEs, as after all, as underscored by Timmons and Spinelli (2003) it is the lead entrepreneur that must be seen to be “taking charge of the success equation”.

**Environmental variables**

This paper is primarily focussed on investigating the nature of possible relationships between profile elements of the SMMTE owner and intermediate outcomes in the form of the SMMTE preferred strategic behaviour that an SMMTE will have. SMMTEs, according to Bennett (2000), cannot be divorced from the fact that the external environment impacts on the host population, the tourists and the businesses that are in the tourism system. It could be assumed, however, that within a homogenous geographical area, such as South Africa, that such influence would be
generally the same for all SMMTEs. It is, however, further noted by De Coning (1988) that the extent to which external variables impact on an SMMTE are to some extent influenced by the ability of entrepreneurs to understand the external environment.

Against this background, the paper endeavours to establish the potential linkages or relationships between the characteristics or attributes of SMMTE owners and the manifestation of strategic behaviour. The investigation of the strategic behaviour in SMMTEs with particular emphasis on determining which variables co-produce preferred manifestations of strategic behaviour in such enterprises is because the preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes which is dependant on the attributes of the entrepreneurs.

**Methodology**

**Study design**

The research design for the proposed study involved is primarily descriptive and explanatory research.

**Sample**

The target population covered all nine provinces of South Africa. In order to incorporate SMMTE’s on a national basis, the services of a commercial database company were used to compile a database of SMMTEs, caused by a dearth of workable alternatives concerning comprehensive databases of SMMTE’s in South Africa. The decision-makers of formally registered businesses (informal businesses were not included) were selected by rank (most senior person: managing director, chairperson, manager etcetera). The businesses included could be described as head offices and stand-alones employing no more than 100 staff. The researcher selected the most appropriate business types and codes associated with the tourism industry (the
so-called unit of analysis) to extract a representative national list of 1965 SMMTE’s for the purpose of this research. In total 316 questionnaires were returned which represented a total response rate of 16.08 percent, of this 168, or 8.56 percent was deemed, conservatively, to be the useable response rate.

**Research instrument**

The research instrument used was a structured questionnaire consisting of five sections. Section A of the research instrument consists of question items related to determining the demographic profile of respondents. This section of the instrument determines the geographical location; the duration of business operation, the number of branches, if any; the type of businesses, the tourism sector the businesses consider to be their core business; the number of full and part-time employees, an estimation of the number of new full-time posts the business could create within five years; an estimation of the annual gross total turnover and total gross asset value; the gender and age profile of the respondents; the highest educational level; and an indication of the population group of the respondents. Most of the said items have been derived from other instruments that have been previously validated by other researchers such as Loubser (1999), Maas (1996: 249); and Orford, Herrington and Wood (2004).

Section B of the research instrument consists of question items that have been previously validated by other researchers such as Maas (1996). Various questions were posed to the SMMTE owners concerning their personal convictions (locus of control), incidence of formal education in the management fields, experience in the management fields, practical/technical experience relevant to the workplace, risk propensity, reasons provided as to why people started their own business, decisions that influence the business, common challenges and various approaches to address these factors.
Sections C and D of the research instrument consists of question items that are intended to measure the strategic behaviour dimensions at organisational and individual levels of the strategic behaviour construct.

**Results**

<table>
<thead>
<tr>
<th>Table 4</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key business characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 42 months (or 3.5 years) in operation</td>
<td>146</td>
<td>86.9%</td>
</tr>
<tr>
<td>No branches, other than the main business</td>
<td>133</td>
<td>79.2%</td>
</tr>
<tr>
<td>Private company (Pty) Ltd registered</td>
<td>63</td>
<td>37.7%</td>
</tr>
<tr>
<td>Are family businesses</td>
<td>95</td>
<td>57.6%</td>
</tr>
<tr>
<td>Operate in the accommodation and catering sector</td>
<td>103</td>
<td>61.3%</td>
</tr>
<tr>
<td>Employ 10 to 49 full-time staff</td>
<td>75</td>
<td>45.2%</td>
</tr>
<tr>
<td>Expect to employ an additional 10 to 49 full-time employees within the next five-year period</td>
<td>46</td>
<td>28.8%</td>
</tr>
<tr>
<td>Employ up to 4 part-time employees per annum</td>
<td>67</td>
<td>40.1%</td>
</tr>
<tr>
<td>Estimated total gross turnover of between R1 million and R5 million</td>
<td>63</td>
<td>39.6%</td>
</tr>
<tr>
<td>Estimated total gross asset value of more than R1.5 million (excluding fixed property)</td>
<td>64</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Demographic characteristics**

The typical demographic profile of the SMMTEs can be characterised as follows: the majority of respondents can be demographically characterised as originating from the Western Cape (28.7%) and Gauteng (26.2%); are most likely based in an urban/metropolitan area; are most likely (28.6%) 45 to 54 years of age; most likely (70.5%) of the male gender; the highest number have attained a Grade 12 (33.5%) qualification; and, the majority (85.9%) can be classified as being from the White population group. The profile of this study compares favourably with that of the South African SMMTE profile provided by THETA (2009a).
**Business characteristics**

The typical business characteristics of the SMMTEs included in the study are summarised in Table 4.

**The typical attributes of the SMMTEs**

The typical attributes of the SMMTE owners in the study suggest the following: the majority of owners have an internal locus of control; many have almost no formal management education in all the functional management areas and the largest proportion have received management functional education in only two functional areas; many have almost no prior-experience in all functional management areas and the largest proportion have some prior-experience in three of the functional management area; however, a large proportion indicated appropriate technical competence for the operations of their business and almost half of the respondents indicted three entrepreneurial reasons for starting a business but a small proportion did indicate no entrepreneurial reason for starting their businesses; the majority of owners indicated a tendency toward risk aversion and thus were deemed non-entrepreneurial for the purpose of this study; and lastly, the holistic capabilities of the respondents indicate an internal approach was dominant within these SMMTEs and were, thus, also deemed non-entrepreneurial for the purpose of this study.

The study then stated the main research hypothesis, along with its set of sub-hypotheses, and then proceeded to investigate a possible relationship between strategic behaviour (the dependent variable) and entrepreneurial attributes (independent variables) using inferential statistics. Although the research hypotheses of this study are implicitly stated through the *a priori* model, as depicted in Figure 1, to assist with data analysis objective of this paper, only the main research hypothesis is stated hereafter:
Null Hypothesis (H₀) = There is no association between the owner attributes of the SMMTEs (that are characterised by locus of control, reasons for starting a business, holistic capabilities, propensity to risk, formal management education and prior-experience) and preferred strategic behaviour.

Alternative Hypothesis (H₁) = There is an association between the owner attributes of the SMMTEs (that are characterised by locus of control, reasons for starting a business, holistic capabilities, propensity to risk, formal management education and prior-experience) and preferred strategic behaviour.

The relationships and constructs, as depicted in the a priori model, were empirically tested through the means of various statistical techniques:

- Reliability testing of the data set was conducted.
- Validity of the research instrument was determined.
- Reliability of the new constructs after exploratory factor analysis was determined.
- The relationships between the variables of the hypotheses were tested through Spearman’s rho and ANOVA.
- The relationships between the variables of the hypotheses were tested, further, through regression analysis.

A summary of the associations between the variables (ref. Table 5) revealed the overall significant associations concerning the selected attributes of venture owners and the potential manifestations of strategic behaviour within the SMMTEs. This was determined after the data had been subjected to the Spearman’s rank-order correlation coefficient (Spearman ρ), ANOVA and multiple regression analyses.
### Table 5

<table>
<thead>
<tr>
<th>Sub-Hypothesis</th>
<th>Spearman’s Rank-Order Correlation Coefficient (Spearman’s ρ) and ANOVA</th>
<th>Regression analysis</th>
<th>Statistically significant results of Spearman’s ρ and regression analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>At p&lt;0.05 significance level</td>
<td>At p&lt;0.05 or 0.10 significance levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. internal locus of control</td>
<td>holistic understanding (0.17), vision (0.18), fostering strategic dialogue (0.16), and, gathering and sharing market intelligence (0.17)</td>
<td>exploit ingenuity; vision; foster strategic dialogue; planning focus; gathering and sharing market intelligence</td>
<td>Vision; Foster strategic dialogue; Gathering and sharing market intelligence;</td>
</tr>
<tr>
<td>2: formal education</td>
<td>holistic understanding (0.23), fostering strategic dialogue (0.33), planning focus (0.35), task environment awareness (0.22), and, gathering and sharing market intelligence (0.17)</td>
<td>exploit ingenuity; foster strategic dialogue; planning focus; task environment awareness</td>
<td>Foster strategic dialogue; Task environment awareness</td>
</tr>
<tr>
<td>3: prior-work experience</td>
<td>holistic understanding (0.18), fostering strategic dialogue (0.19), planning focus (0.21) and, gathering and sharing market intelligence (0.17)</td>
<td>vision; gathering and sharing market intelligence</td>
<td>Gathering and sharing market intelligence</td>
</tr>
<tr>
<td>4: entrepreneurial reasons for starting a business</td>
<td>exploiting ingenuity (0.22), holistic understanding (0.24), creativity (0.21), vision (0.25), fostering strategic dialogue (0.27), planning focus (0.24), synergistic business development (0.33) and, task environment awareness (0.33)</td>
<td>synergistic business development; task environment awareness</td>
<td>Synergistic business development; Task environment awareness</td>
</tr>
<tr>
<td>5: holistic profiles</td>
<td>exploiting ingenuity (0.29), holistic understanding (0.26), creativity (0.19), vision (0.19), fostering strategic dialogue (0.32), planning focus (0.33), synergistic business development (0.21) task environment awareness (0.19), and, gathering and sharing market intelligence (0.24)</td>
<td>exploit ingenuity; holistic understanding; vision; foster strategic dialogue; planning focus, creativity</td>
<td>Exploit ingenuity; Holistic understanding; Vision; Foster strategic dialogue; Planning focus, Creativity</td>
</tr>
<tr>
<td>6: risk-seeking propensity</td>
<td>holistic understanding; planning focus; task environment awareness. (ref. Table 7.6.4 - ANOVA results)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Discussion of findings**

The study noted that a number of the sub-dimension elements of the strategic behaviour construct (ref. Table 5) were identified as having no (overall) statistically significant relationship with the
identified attributes of the venture owners. The study identified, as summarised in Table 5, the following significant end-results of the interaction that involves SMMTE owner attributes and the manifestations of strategic behaviour:

i. The **internal locus of control** owner attribute seemingly affects the strategic behaviour of SMMTE owners as to how they perceive the **vision** of their businesses, how they foster **strategic dialogue** within their ventures, and how they enact the **gathering and sharing of market intelligence** for their businesses.

ii. The **formal education** owner attribute seemingly fosters **strategic dialogue** with all their key stakeholders and contributes towards the improved **task environment awareness** within SMMTEs.

iii. The **prior-experience** owner attribute of SMMTE owners seemingly enables the strategic behaviour of SMMTE owners towards an improved **gathering and sharing market intelligence** that is used by SMMTEs.

iv. The **entrepreneurial reasons for starting a business** owner attribute seemingly motivates the strategic behaviour of SMMTE owners to **synergise business development** activities and contribute towards the improved **task environment awareness** of their businesses.

v. The **holistic profiles** owner attribute seemingly affects the strategic behaviour of SMMTE owners through enabling them to perceive the **holistic understanding** of their businesses; engendering the **vision** formulation of their businesses; **fostering strategic dialogue**; developing a **planning focus**, and encouraging **creativity** within SMMTEs.

vi. The **risk-seeking (propensity) profile** owner attribute seemingly **does not have an overall**
affect on the strategic behaviour of SMMTE owners in conducting the affairs of their businesses.

<table>
<thead>
<tr>
<th>Elements (E)</th>
<th>Intermediate Outcomes</th>
<th>Final Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Attributes</td>
<td>Strategic Behaviour (SB)</td>
<td>Success or failure</td>
</tr>
<tr>
<td>1. internal locus of control</td>
<td>Vision; Foster strategic dialogue; Gathering and sharing market intelligence</td>
<td></td>
</tr>
<tr>
<td>2: formal education</td>
<td>Foster strategic dialogue; Task environment awareness</td>
<td></td>
</tr>
<tr>
<td>3: prior-work experience</td>
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<td>5: holistic profiles</td>
<td>Exploit ingenuity; Holistic understanding; Vision; Foster strategic dialogue; Planning focus; Creativity</td>
<td></td>
</tr>
<tr>
<td>6: risk-seeking propensity</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: The populated a priori theoretical model and its statistically significant associations

The study did, however, find statistically significant results of the Spearman’s ρ and regression analyses, as depicted in Table 5, between some of the attributes of the owners and certain elements of strategic behaviour. These results (ref. Table 5) were used to populate the a priori...
theoretical model and are depicted in Figure 2 (ref. intermediate outcomes).

Although the research hypothesis of this study is implicitly stated through the a priori model, as depicted in Figure 2, the research findings provide support that there is an ultimately statistically significant association between the independent and dependent variables, and that the alternative hypothesis can be accepted, namely, there is an association between the specific attributes of the owners of the SMMTEs (which is characterised by locus of control, reasons for starting a business, holistic capabilities, formal management education and prior-experience) and the selected strategic behaviour variables. Furthermore, the research findings provide support that there is an overall statistically significant association between the various independent and dependent variables, as stated by the sub-hypotheses, and that the following alternative sub-hypotheses, can be accepted, namely:

i. There is a positive relationship between locus of control and strategic behaviour.

ii. There is a positive relationship between management education and strategic behaviour.

iii. There is a positive relationship between prior-management experience and strategic behaviour.

iv. There is a positive relationship between entrepreneurial reasons for starting a business and strategic behaviour.

v. There is a positive relationship between greater holistic capabilities and strategic behaviour.

However, the research findings do not provide support that there is an overall statistically significant association between the risk propensity independent variable and the strategic behaviour dependent variables and, consequently, the following null sub-hypothesis is accepted: the risk-seeking profile owner attribute seemingly does not have an overall effect on the strategic
behaviour of SMMTE owners in conducting the strategic affairs of their businesses. This may be indicative of SMMTE owners not aspiring to grow their businesses (namely, have capped growth motives), and, are often motivated by non-financial considerations, such as lifestyle (including familial) factors, when starting and managing their SMMTEs. This has a direct implication on the varying levels of strategic behaviour evidenced within the SMMTEs, and consequently, the study postulates that SMMTE owners employ a risk-avoidance profile when formulating strategic behaviour.

The populated conceptual (or, a priori) model and its sub-components, depicted in Figure 2, focused primarily on the two main constructs: the attributes of an SMMTE owner and preferred strategic behaviour variables that is manifested within an SMMTE. The study focused on analysing the association between specific attributes of the SMMTE owners that produce preferred strategic behaviour and the manifestation of preferred strategic behaviour within SMMTEs (Intermediate outcomes). The study assumes that certain preferred strategic behaviour of the SMMTE has a higher likelihood to translate into preferred final outcomes, which can manifest in different formats – success or failure.

**Recommendations and conclusion**

This study examined the determinants of strategic behaviour through the use of a sample frame of SMMTEs owners in the formal tourism industry of South Africa. It is assumed that in cases where strategic behaviour manifests in SMMTEs, that there should be a higher likelihood of successful outcomes (and conversely, failure where strategic behaviour does not manifest in SMMTEs) for such SMMTEs. The importance of successful SMMTEs as a mechanism for job creation, innovation and long-term sustainable economic development, for a developing country economy such as South Africa can not be emphasised enough.
To ensure long-term sustainability, notes Whittle (2000), the owners of SMMTEs need to make efficient and effective business decisions about the internal and external threats and challenges their businesses face to ensure that they have enough strategic information to make decisions and maintain their competitive advantage in the tourism industry. Crijns and Ooghe (1996) indicate that, in general, it can be viewed that the development and growth of SMMEs can be attributed toward how quickly the entrepreneur, the business team and organisation can adapt and learn from their experiences in combination with the external and internal environments. This implies that the core elements of strategic behaviour are internal and external and, according to Hofer (1991), should include market-related, industry-related, competitor-related, supplier-related, resource- and capability related, and broader environmental-related strategic challenges.

The practical recommendations indicated in this section are derived from the summary of the relationships between specific SMMTE entrepreneurial attributes and selected strategic behaviour variables, as depicted in Figure 2. In terms of the said theoretical model, strategic behaviour can be developed at two main levels: the individual level and the organisational level.

**Individual level**

The study found that the independent variables were overall not good (statistically significant) predictors of strategic behaviour of SMMTE owners. The study, further, found however, that statistically significant associations between the owners’ attributes (independent variable) and a number of sub-dimensions of strategic behaviour (dependent) variables as depicted in Figure 2 exist.

The study noted the findings of the descriptive statistics which indicated that the majority of respondents in this study had mostly entrepreneurial reasons for starting their businesses.
Agencies involved with SMMTE development need to assess more the entrepreneurial attributes of aspiring tourism entrepreneurs who want to start an SMMTE, as this has a direct bearing on the strategic behaviour that such ventures will evidence, and which can ultimately impact on their growth orientation (capped- to growth-directed) and sustainability. This study proposes the provision of strategic behavioural skills to be included as part of the entrepreneurship programmes of schools and universities so as to enhance the entrepreneurial attributes of aspirant tourism entrepreneurs. It is suggested that the entrepreneurial reasons for starting an SMMTE can contribute towards the development of synergistic business developments through putting together business projects that contribute towards business sustainability; and, will contribute towards improved task environment awareness within the SMMTE in order to ensure that business projects are completed as profit-effectively as possible.

The study found that a good predictor of strategic behaviour is the formal education that SMMTE owners receive which in turn has a direct bearing on the strategic behaviour that such ventures will evidence; and ultimately their sustainability. The findings of this study, however, show that the descriptive statistics noted that the majority of respondents in this study had no formal management education with only a small minority having receiving formal education in all management functional areas. It is recommended that learning opportunities be provided for applied learning in all management functional areas and that such education should not only include the “hard science” of business plan writing but must also deal with the “soft science” of developing strategic thinking and behaviour competencies of SMMTE owners. Such learning opportunities should also be firmly grounded in the tourism discipline. It is suggested that improved (also implying appropriate) formal education can significantly contribute towards fostering and supporting strategic dialogue with the SMMTE stakeholders; and will contribute
towards improved task environment awareness within the SMMTEs. Fletcher and Harris (2002: 307) indicate that “entrepreneurship education should rather concentrate on the process rather than on the content, with how to aspects being more important than know how”. It is emphasised by Bolton and Thompson (2004) that entrepreneurs “learn by doing” and may need a coach to promote the learning process. Thus, education is needed to be “hands-on” rather than “talk about” but owners also need to accept that they need “mentoring”. It is further indicated by De Coning (1995: 8) that SMME owners should become “business literate” through upgrading their knowledge skills in respect of general management, finance, marketing and the management of people as these are considered to be necessary “entry level” abilities for entrepreneurs. The descriptive results of this study further indicated that the majority of SMMTE owners had received no formal education in strategic management and tourism business studies.

The **internal locus of control** attribute is a good predictor of strategic behaviour and it is suggested that SMMTE owners need to develop this attribute further so as not feel disempowered due to the various macro-environmental issues that may be impacting on the operation of their ventures and which may be beyond their control. It is suggested that an improved internal locus of control can contribute towards the formulation of more appropriate (even far-reaching) visions; will tend to foster strategic dialogue with stakeholders; and will contribute towards the improved gathering and sharing of market intelligence. It is, in addition, proposed that SMMTE owners be provided with strategic business support and education to the point where they can depend on their own skill (internal locus of control) and will, thus, be more likely to work harder and improve their strategic abilities to manage their businesses. The descriptive results of this study further indicated that the majority of SMMTE owners had an internal locus of control.

**Prior-experience** has also been identified as a good predicator of strategic behaviour. This is
indicative of the need for prospective SMMTE owners to first gain appropriate prior-experience through working in the tourism industry before establishing their own SMMTE. The results suggest that the experience gained in this way impacts on the type of strategic behaviour that is evidenced within SMMTEs. It is suggested that prior-experience can contribute towards the improved gathering and sharing of market intelligence supposedly because appropriately experienced SMMTE owners know how to operate in a networked tourism industry and have experience in dealing with its idiosyncrasies. It is noted, however, that the findings of the descriptive statistics bear evidence that the majority of respondents in this study had prior-management experience in at least three of the management functional areas with an almost equal number having no prior-experience in any of the management functional areas. It is suggested that because of the different (even non-tourism) management backgrounds from which many of the SMMTE owners have gained their prior-experience, there is need to acknowledge and address this through possibly teaming-up entrepreneurs with SMMTE entrepreneurs who have the relevant prior-experience (possibly, in the form of mentor-mentee networks).

The **holistic** attribute of successful SMMTE owners is a good predictor of strategic behaviour because it leads to the ability to take a holistic view of the SMMTE and its environment. This implies an understanding of the different problems and issues, and how they influence the SMMTE. It is suggested that the holistic attribute of SMMTE owners can contribute towards the formulation of more appropriate (even far-reaching) visions; exploiting ingenuity, encouraging a planning focus, engendering creativity, fostering strategic dialogue with stakeholders; and will contribute towards the improved gathering and sharing of market intelligence. It is noted, however, in the findings of the descriptive statistics that the majority of respondents in this study had an internal approach when conducting their business. Consequently, there is need to develop
the ability of SMMTE owners to have holistic ability that includes external factors when conducting their business behaviour because it leads to the ability to take a holistic view of the SMMTE including the environment in which it is situated.

The research findings indicated that the risk-seeking behaviour attribute of SMMTE owners is not a good predictor of strategic behaviour. The descriptive research findings of this study also indicate that most SMMTEs avoid risk when conducting their business. It would, thus, be prudent of agencies involved in SMMTE development to take cognisance of the risk avoidance strategies of most SMMTEs in the process of designing interventions to assist aspiring SMMTEs so as to ensure the sustainability of these ventures. This is indicative of SMMTE owners who seemingly are not motivated to grow their businesses (namely, have capped growth motives), and are often motivated by non-financial considerations, such as lifestyle (including familial) factors, when starting and managing their SMMTEs. As indicated, the predominance of middle-aged respondents in the study may further reflect a trend towards semi-retirement and subsequent self-employment, and thus the tendency to be more risk-averse.

Finally, the blending of strategic thinking and planning together is a learned practice. The whole purpose of strategy is to create business advantage, to maximise resources, decisions and core competencies. Strategic thinking seems to emphasise the formulation of strategy within the organisation and strategically plan the implementation of these strategies. In an SMMTE scenario, the synergistic effect of both elements operating together is what is required, and quite often strategies for the SMMTE require implementation and action at the same time. The extent to which SMMTE owners manifest strategic behaviour, however, is dependent on a multitude of variables. Some of these variables which are internal to the SMMTE owner, such as strategic thinking skills, are controllable but others may be beyond the control and influence of the
SMMTE owner. Uncontrollable factors were fundamentally external variables over which the SMMTE owner has little, if any, direct influence. The state of the economy and socio-political influences were examples of such external variables. However, the extent of the SMMTEs ability to understand the external environment could affect the influence of the external variables on the performance of the SMMTE.

Organisational level

SMMTEs owners should create a business climate whereby it is conducive towards supporting the creative strategic act within the entire enterprise. SMMTEs should also draw from the entire SMMTE talent pool because the most effective strategic entrepreneurial behaviour sometimes originates from individuals or teams whose input was not expected. It can be further emphasised that SMMTEs should promote divergent thinking, the generation of different views, within the enterprises which should result in creative and strategic behaviour.

Although macro environmental factors do impact on the strategic behaviour of SMMTEs, the plethora of SMMTEs operating within tourism destinations means that they have the potential to strategically influence the environmental, social and economic (triple bottom line) progress towards achieving sustainability within such destinations. The sustainable development of destinations places SMMTEs in the centre of sustainability debates as they have the potential to form strategic networks and spread the environmental, social and economic benefits within their destinations. This implies that measureable sustainability indicators need to be developed for SMMTEs and that further research that measures the interaction between sustainability, strategic behaviour and strategic networks needs to be conducted.

Strategic behaviour, recommends Grundy and Brown (2002), is a habit that SMMTE owners
should continually cultivate. Such behaviour should include devoting time regularly to engage with the strategic issues of the SMMTE; focussing on one strategic issue at a time; using *ad hoc* free time to work on strategic issues; gathering small, but rich, data from the key stakeholders (clients, competitors, staff, etc.); and to be confident of their ability to think strategically. This will assist with translating strategic behaviour imperatives into practice.

**Acknowledgements**

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**References**


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University of Stellenbosch.

Knowledge, Perception, and Application of Strategic Marketing in MSMEs (Micro, Small, and Medium Enterprises) in Bogota*

By Ricardo Vega and Sandra Rojas

Abstract

The theory states the strategic marketing as one of the most important components of the management of any organization. In this work, some aspects regarding the use of this management tool in Bogota’s MSMEs were researched. Although the attitude about the utilization of strategic marketing management was positive and there is a clear perception of the benefits it gives, there are some barriers that impede its application. The main barriers detected were the low training in strategic marketing that their employees have and the lack of resources and time to implement this process. With these results in mind, it is pertinent to analyze the focus of the Colombian support programs, to this kind of companies, about the marketing management elements. Academics and practitioners should propose theoretical and practical concepts to apply this tool in a more extensive way in Colombian MSMEs.

Introduction

MSMEs are an important source of employment and Gross Domestic Product (GDP) in the countries. In the case of low income countries, they represent 31 percent of employment and 15 percent of the GDP; for countries of middle income, SMEs are around 55 percent of employment and 40 percent of the GDP. And in high income countries, they achieve levels of around 65 percent in employment generation and 50 percent in their GDP.

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For this article, MSMEs are defined based on the Colombian norms (Diario Oficial 2004) dividing them in Micro Companies, with a number of employees no more than 10 workers or total assets less than 500 legal monthly minimum wages (LMMW) (approximately US$132.581 in 2010). Small Companies are businesses with a number of employees between 11 and 50 workers or total assets between 501 and 5,000 LMMW (approximately between US$132.581 and US$1,325,809). Medium Companies are companies with a number of employees between 51 and 200 workers, or total assets between 5,001 and 30,000 LMMW (approximately between US$1,325,809 and US$7,954,856). And Large companies are enterprises with more than 200 employees or total assets greater than 30,000 LMMW (approximately US$7,954,856 or more).

**Strategic Marketing Management in MSMEs**

Strategy is defined as the process "to define the reach and purpose of the business, its objectives, the initiatives and the resources to achieve those objectives" (Cravens, and Pierce 2007). And the process to apply this management tool is the strategic planning whose essence is “in all levels of the company to identify possible risks to avoid them and identify opportunities” (Mullins, Walker, Boyd, and Larréché 2007).

Porter (1991) says that “the strategic success requires the choice of a relatively attractive position given industry structure, the firm’s circumstances and the position of
competitors. It also requires bringing all the firm’s activities into consistency with the chosen position.”

One of the most important elements of the strategy is the marketing strategy, and Mullins, Walker, Boyd, and Larréché (2007) establish that the main interest of this part of the strategy is “to assign and to coordinate effectively the marketing activities and resources in order to achieve the company’s goals in a specific market, specifying the target markets for a particular product or line of products.”

Furthermore, Uncles (2000) states that the marketing strategy “is concerned with the processes and activities associated with creating and satisfying customers by continually assessing their needs and wants, and doing so in a way that there is a demonstrable and measurable impact on business performance.” Palmer and Pels (2004) say that “Market orientation is therefore a component of the overall business strategy, which is seen to contribute positively to business performance.”

But, it has been found that strategic marketing is not broadly applied in the SMEs like it could be thought (Lancaster and Waddelow 1998), and it is affected primarily by three elements, interrelated to each other: the attitude that the company has in front of the importance that should play the marketing in the firm, the focus of the managers’ work in the SMEs, and the availability of resources to implement this process. About the first element, Murdoch, Blackey, and Blythe (2001) found that in Welsh SMEs the marketing is perceived more as a short term activity than as a strategic function and then there is a general indisposition to invest money in this activity seen as something 'expensive' and ineffective.
One of the main barriers is that the MSMEs consider the process too long (poor return on the invested effort) and it will be outdated when it is finished (a waste of resources) (Lancaster, and Waddelow 1998). It is not seen as a continuous process of adaptation to the environment, but as an element that provides useless information.

Their attitude in front of this process comes from the misunderstanding that the marketing is impossible to evaluate in terms of cost, and its results are intangible and of difficult measurement. It is considered more a cost than an investment. The marketing becomes a peripheral activity and it does not have a significant impact on the business performance (Carson, and McCartan-Quinn 1995).

Murdoch, Blackey, and Blythe (2001) say that in this kind of organizations, managers put more emphasis in ‘doing’ than in ‘thinking.’ They are more focused on the day by day activities than on the medium and long term thinking that demands the strategic planning, and in the case of Colombian SMEs, they do not write formal marketing plans (Zapata 2005). Lancaster and Waddelow (1998) affirm that the SMEs managers` focus is ‘the processes’ more than ‘the strategy.’

Lancaster and Waddelow (1998) add that few managers understand that ‘thinking’ is one of their most important activities. They jump from one task to another and are oriented towards the achievement of results in the short term. Their ‘work ethic’ and their culture are based on ‘getting things done’. They feel that it is better to make things than simply to think about them. This takes them to plan based on the firm’s tradition and on tactical things according to their day by day managerial reality. The positive part of this situation is that it takes them to generate action plans they consider can be implemented.
Their conclusion is that this situation has four consequences: a constant pressure with the work; failings in the prioritization process becoming problem solvers; it is rewarded more the loyalty that the effectiveness in their employees; and they enter in a vicious circle of the ‘here and now,’ believing that if they do not solve the urgent problems there won't be future for the company (Lancaster, and Waddelow 1998). As the proverb says, “urgent things do not permit to do the important ones”. This characteristic is intensified because many of these managers do not receive a formal education and training in business administration (Kirby 1990).

Regarding the available resources to do strategic planning in SMEs, Knight (2000) affirms that this kind of enterprises, because of their size, lack the capabilities, the market power, and other resources that large companies have. The mentioned situation is reflected in the little experience and training in marketing in this type of companies (Murdoch, Blackey, and Blythe 2001).

Lancaster and Waddelow (1998) found that SMEs cannot offer competitive salary packages that offer big companies and for this reason they hire personnel that provide more empathy and loyalty that attitudes and abilities in its work. Also, they do not have enough time to develop strategic planning.

As a consequence of this situation, a certain number of theories and formal models attempts have been proposed for the strategic planning in SMEs. Murdoch, Blackey, and Blythe (2001) say that none of these models and theories has been adopted by SMEs and those meaningful guides have not been created to this respect. The findings show that strategic marketing planning is discouraging in this type of organizations and generates
resistance against it (Murdoch, Blackey, and Blythe 2001). But these authors complement that this fact is more related to the way marketing concepts are implemented than to the possibility to transfer them to the SMEs.

Lancaster and Waddelow (1998) concluded that the process of marketing strategic planning is created for big companies and a simpler methodology is required in the case of SMEs. But they recognize that marketing strategic planning is like accounting. There are common principles that can be adapted depending on the specific necessities of each organization. The problem for them is to find a practical way to put in practice the principles of marketing strategic planning in such a way that it covers the organizational characteristics of SMEs.

There is an entire theoretical framework to develop marketing strategic planning independently of the firm`s size, but there are also many barriers that hinder the application in the case of SMEs. The necessity to propose theoretical solutions with pragmatic applications to resolve this situation in a given environment appears (Watkin 1986; Alpander, Carter, and Forsgren 1990). But this position will be more coherent if there is a previous characterization of the current state of the context in front of the application of the marketing strategic planning.

**Methodology**

This research was developed using a descriptive and transversal design with Bogota’s MSMEs.
Based on the Murdoch, Blackey and Blythe (2001) classifications, the following research areas were defined, related to the knowledge and attitude of the businesses about the strategic marketing:

- customer and customer focus
- competitive advantage
- market research
- marketing communications
- marketing plans formalization
- importance of the different time horizons (short, medium, and long term) in marketing planning
- benefits perception of marketing planning
- barriers to apply marketing planning

In the survey applied, the demographic data were collected first and then the areas researched and defined above. The questionnaire could be answered in a short time (between eight and 12 minutes) to improve the response level, including open and closed questions.

The invitation to participate was sent by e-mail to a database compiled by the researcher and where Bogotá’s MSMEs were covered. The mail included a link to the auto-applied survey that was filed in the Spanish website www.encuestafacil.com. When the application of the surveys finished, the data was exported to Excel to do the results analysis that are showed in the next section.
Results

The initial sample contained 1074 companies and was the number of mails sent. 74 surveys were recovered or 6.8 percent of gross response rate. 19 responses were eliminated giving 55 final valid surveys with a 5.1 percent of net response rate, similar to other response rates found in similar studies that fluctuated between 2.95 percent and 10.19 percent (Siu, Fan, and Lin 2004). The elimination reasons of the 19 questionnaires were: 14 surveys were no ended, one of the companies was not from Bogotá, one was a large firm, one business repeated the process, and in two cases the demographic data was inconsistent.

Classification of the Companies (Figure 1)

Businesses were classified on the basis of the number of employees according to Law 905/2004 of the Colombian Ministry of Industry, Trade, and Tourism and this norm defines the companies based on their number of employees or total assets. It was considered more conveniente to use the number of employees, because it was easier to obtain and more reliable data than the asset information.

The final sample had 62 percent of microcompanies, 33 percent of small enterprises, and five percent of medium companies that matched very well with the proportion of businesses created in the period 2003-2005 in Bogotá being 79 percent microcompanies, 16 percent small enterprises, four percent of medium companies, and one percent of big businesses. The sample reflected in a good way the relative composition of the enterprises in this city.
Industrial sectors of the companies (Table 1)

The companies were classified based on the ISIC (International Standard Industrial Classification). 15 firms were manufacturing companies and 40 enterprises were services businesses showing the importance of the service sector in this kind of companies in Bogotá.

Marketing Management Orientation (Lamb, Hair, and McDaniel 2006; Mullins, Walker, Boyd, and Larréché 2007)

31 of the 55 enterprises of the sample had a market orientation and eight had a sales orientation focused on the satisfaction and knowledge of their customers complemented with an adequate distribution system, and 15 companies were focused more on internal factors and were divided between a product orientation (9 of 55) and production orientation (6 of 55).

Competitive Advantage Conceptualization (Lamb, Hair, and McDaniel 2006; Porter, 1991)

It was a multiple choice question and 98 answers were obtained, but just seven firms covered the three defining characteristics of the competitive advantage: benefits of the product, perception of the value of the benefits by the client, and being sources of differentiation in front of the competitors. The results are presented in figure 2.

40 of the 98 answers pointed out the benefits of the product, 26 the attitude of the clients in front of those benefits, 26 the advantage created by the benefits vs. the competence, in 1 answer no alternative was chosen and in five cases other answers were
specified. In general, there was a partial conceptualization of the competitive advantage and more importance was assigned to the internal factor generated by the business, in terms of benefits of the product, than to the external factors as the client and the competitors.

**Customers’ Necessities Detection Process**

The results can be seen in figure 3. This question was of multiple choice and 92 answers were collected distributed this way: in 40 cases the knowledge was obtained by their own experience, 16 enterprises surveyed their customers, 29 detected the necessities in the sales process, just one firm used the outsourcing, and in five cases they used other elements including one company that accepted a great weakness in this point.

Based on these responses, it can be said that in most of the cases a structured market research processes did not exist, most of the businesses trusted in their knowledge of the industrial sector and in the information obtained in the sales processes (69 of 92 answers). In only 17 of the answers, interest in the formalization of this process through surveys applied by the business (16) or hiring a market research company (just one case) was detected.

**Communication Mix Elements (Lamb, Hair, and McDaniel 2006; Mullins, Walker, Boyd, and Larréché 2007)**

The results are in figure 4. It was a multiple choice question and for this reason 111 answers were collected or almost in average 2 responses by firm. Public relations was the element with the highest utilization (29 of 111), in similar proportions direct marketing (25 of 111) and sales forces (23 of 111) and in the lowest proportions advertising (19 of 111)
and sales promotions (10 of 111). But the final objective of this question was to induce to the next question where it was possible to know the conceptualization of the surveyed business people about the elements of the communication mix.

**Conceptualization of the Communication Mix Elements**

In this case the definition of the materials and actions developed to implement each of the communication mix elements answered in the previous question was asked. 20 answers were obtained for advertising, 22 for public relations, and 16 for direct marketing. In other words, in only 58 of the 111 answers the people gave a concrete answer. It is possible that the people surveyed were not sure about the correct response and for this reason they did not complete the answers. In part, this was confirmed because only 11 of the 20 responses about advertising were right, 13 of 22 in the case of public relations, and 10 of 16 of direct marketing (Lamb, Hair, and McDaniel 2006; Mullins, Walker, Boyd, and Larrêché 2007). It was evidenced a conceptual weakness in a significant proportion of the enterprises of the sample.

**Formalization of the Marketing Plans (Figure 5)**

29 of the 55 companies did not formalize their marketing plans using in a high proportion implicit strategies in this type of organizations.

**Planning Time Horizon (Figure 6)**

19 of 55 businesses planned in the short term horizon, almost half (25 of 55) in the medium term horizon, and only seven of the 55 companies planned in the long term horizon which is coherent with the answers of the formalization of the marketing plans. Four
responses were “Other” and three of these firms answered that they did not have any planning time element. These answers raise the short term horizon to 22 of the 55 surveyed organizations.

In other words, there were a low formalization and short horizon planning times to look the future of the companies in the sample.

**Perceived Benefits of the Marketing Planning (Figure 7)**

This was a multiple choice question and 178 answers were collected, in average three responses by company. Almost half of them (86 of 178) put the client as the central element of the marketing planning in the aspects of customers’ recruiting (48 of 178) and retention (38 of 178). Other important proportions (43 of 178) are related to the growing of the firm, in 25 of the 178 responses the definition of the products’ characteristics was considered and in 22 of the 178 answers it was done to analyze the competitors. The obvious question is if the benefits are so clear for business people, ¿why the strategic marketing planning is used in a significant low proportion? One part of the answer is contained in the barriers that they reported in the next question.

**Barriers to the Marketing Planning (Figure 8)**

It was a multiple choice question and had a total of 102 responses. Few barriers are related directly with the planning process by itself: in four of the 102 answers they said the process does not contribute to solve the company’s problems, in four responses it was expressed that this is a more theoretical than practical concept and in other four answers they thought that there is not a clear return on investment. But the main barriers are lack of
resources (33 of 102), low training in the subject (31 of 102), and lack of time to develop the planning process (19 of 102).

These barriers were consistent with the previous answers, like the low conceptualization of the basic marketing elements, low formalization of marketing plans, and the short term horizon in the planning process.

**Conclusions and Recommendations**

Business people in this context have a clear concept about what the role of marketing in the organizations should be, stating that the client has the central role in the marketing processes, but this conceptualization is not reflected on the day by day management of Bogotá’s MSMEs.

One of the main causes for this situation is the low level of knowledge they have about basic marketing concepts, like competitive advantage and communication mix, that are necessary in order to define strategic plans in the enterprises. For this reason, it is difficult that they apply those concepts in their business commercial management.

Another significant aspect is the function assigned to the market research process in Bogotá’s MSMEs. The attitude is to consider, in a high proportion, that they know sufficiently the customers because of their experience in the sector and for the knowledge they acquire in the sales interviews. They developed market research in a low proportion and the outsourcing of this function is a rare event, avoiding the utilization of one of the most powerful tools in order to gain competitiveness in their markets. This behavior is not
centered in the client and it is not congruent with the opinions given in the point about marketing management orientation.

This knowledge and attitude about strategic marketing planning is also reflected in two formal elements of the process, the low generation of written marketing plans and the short term planning horizon they apply in the marketing processes. They are managing marketing in an informal and short-time way and this situation is similar to the findings in other contexts.

Complementary to the aspects analyzed before about the application of strategic marketing management in this kind of enterprises, there are some barriers impeding the use of this management tool. The most frequent barrier is the low training in marketing planning that their employees have. The other significant barriers are the lack of resources and time to implement this process.

There is a clear perception about the benefits they could get of the strategic marketing management process, but it is not complemented with its practical application because of the lack of resources, attitudes, and barriers detected.

Although this research is descriptive, transversal and the sample is small, it would be pertinent to develop other qualitative and quantitative longitudinal researches to detect the structural elements that give the results found in this work. These works can be extended to other geographical areas of Colombia in order to analyze the situation all over the country.
Another implication is the revision of the Colombian entrepreneurship and MSME’s support programs about their marketing components and analyze if they include the concepts, practical tools, and long term follow-up elements to do an effective and useful marketing management or if they are more focused on the financial or other management aspects.

With the results of this work in mind, Colombian researchers have the challenge to structure conceptual and practical frameworks in order to improve the strategic marketing management in this type of companies in the country and to reduce their high mortality. A possible option is the research of specific industrial sectors to generate the recommendations adapted at each one of them.
References


### Tables

#### Table 1

**Classification of Companies by Industrial Sector**

<table>
<thead>
<tr>
<th>Industrial Sector</th>
<th>Number of Companies</th>
</tr>
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<tbody>
<tr>
<td>Others</td>
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<tr>
<td>Manufacturing</td>
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<tr>
<td>Health services</td>
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<tr>
<td>Retail</td>
<td>6</td>
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<tr>
<td>Communications</td>
<td>3</td>
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<td>Educational services</td>
<td>2</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
</tr>
<tr>
<td>Auto repair, services and parking</td>
<td>1</td>
</tr>
<tr>
<td>Restaurant</td>
<td>1</td>
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<tr>
<td>Financial activities</td>
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<td>Real state</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>
Figures

Figure 1

Classification of Companies by Number of Employees

- 10 or less: 60%
- Between 11 and 50: 30%
- Between 51 and 200: 5%
- More than 200: 5%
Figure 2

Competitive Advantage Conceptualization

![Bar chart showing the characteristics of the competitive advantage.]

- Benefits of the product: 40 responses
- Value for the client: 25 responses
- Advantage on the competence: 20 responses
- None: 5 responses
- Other: 10 responses

Figure 3

Processes Used for Detection of Necessities

![Bar chart showing the processes used.]

- We are unique in the market (It is not necessary the determination): 45 responses
- It is known by the own experience: 40 responses
- Customers' surveys: 15 responses
- They are detected in the sales process: 25 responses
- Outsourcing: 5 responses
- Other: 10 responses
Figure 4

Elements of Communication Mix

![Bar chart showing elements of communication mix]

Figure 5

Formalization of the Marketing Plan

![Bar chart showing formalization of marketing plan]
Figure 6

Planning Time Horizon

<table>
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<th>Planning Time Horizon</th>
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<tr>
<td>6-18 months</td>
<td>25</td>
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<tr>
<td>Other</td>
<td>2</td>
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</tbody>
</table>
Figure 7

Perceived Benefits of the Marketing Planning Process

- Business growing
- Recruiting of new clients
- Retention of the current clients
- Definition of the products' characteristics
- Competition analysis
- None
- Other

Number of responses vs. Perceived benefits
Figure 8

Detected Barriers in the Marketing Planning Process

- Low training in Marketing
- Lack of resources
- It does not contribute to practical solutions to the business problems
- No clear ROI
- Lack of time
- This is a theoretical concept
- None
- Other

Number of responses

Detected barriers
Social Entrepreneurship Workshop: Combining experiential education and entrepreneurship to attack social issues - perspectives from America and Ireland

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The workshop is designed to assist entrepreneurship educators to identify and introduce different forms of experiential learning that will enable students to better understand how entrepreneurship can be employed to address social issues. The workshop will explore the advantages and disadvantages to this form of learning for the student, and the challenges that it might create for the educator. The workshop will highlight specifically how such a learning experience can be adopted with regard to social entrepreneurship and it will detail examples used by the authors that have generated positive results for all stakeholders.

Keywords: Social Entrepreneurship, Experiential Learning, Ireland, America
Network Benefits: Linking use of social networking by SMEs to business success.

Ted Mallett, Marvin Cruz

Canadian Federation of Independent Business

Abstract

In recent years, social networking has exploded as a form of interactive communications. Aided by advances in communication technologies and pricing structures, social networking has been transforming the delivery and structure of information and putting the once capital-intensive role of broadcasting within reach of individuals. Its impact on personal communications and entertainment has been obvious, as has its effects on the businesses directly connected to these industries. Less is known, however, on how traditional SMEs have actively embraced these forms of networking and whether adoption has led to stronger business performance. This study is designed to find if there is a link between the intensity of business use of social networking tools by SMEs and how well these individual businesses are performing—and if so, how strong a link. The timing of this kind of study is right because the extreme swing of the business cycle in 2008-2009 coincides with the early- to mid-level adoption rates of social networking among SMEs.

Introduction

Small and medium enterprises (SMEs) function in a fiercely competitive and ever-changing world. To effectively compete in such an environment, SMEs must equip themselves appropriately to meet any challenges. One of the emerging challenges facing these enterprises is how to appropriately incorporate and harness the mass collaboration that social networks facilitate into their own business strategy.

In recent years, social networking as it is seen in the form of Facebook, Ebay, Twitter, YouTube and others has exploded as a form of interactive communication. Aided by advances in technology, social networking has changed the delivery, structure and availability of information,
putting the once capital-intensive role of broadcasting within the reach of individuals. This has empowered and transformed individuals around the world from passive recipients of information and products into active creators of content (information and ideas) who are able to collaborate with one another in social networks. For businesses, social networking is already becoming an essential tool for keeping in touch with their suppliers, customers and contacts, recruiting employees, and promoting their profile and brand. In this respect, and as it pertains to business strategies, social networking provides businesses with an opportunity to collaborate and share knowledge with their network, thus creating new adaptive more successful business strategies.

Examination of the manners in which companies can take advantage of emerging social networking technologies, as in the case of Li and Bernhoff (2008), suggest that entrepreneurs who make use of social networks are more likely to achieve greater success than those who do not.

Although the general assumption is that a positive correlation exists between the use of social networking tools in the business environment and business success, earlier studies on internet usage showed considerable lags in adoption by SMEs, which infer that the costs/benefits to adoption are connected to considerable economies of scale. The purpose of this paper is to determine whether there is indeed a link between the intensity of use of social networking tools by SMEs and their competitiveness and success. The analysis should be able to identify whether small businesses, individually or in groups, have been able to utilize social networks towards increased levels of growth.

**Literature review**

The argument that social networks are a factor that can beneficially influence entrepreneurial success has been given considerable attention in the literature. For instance,
Brudel and Preisendorfer (1998) suggest that large personal social networks stimulate the entrepreneurial success of its participants by providing access to more reliable and exclusive information. Further, a diverse network give access to a diversity of customers and suppliers as friends and acquaintances help to spread the information through their own personal networks. This argument is echoed by Dubini and Aldrich (1991), who propose that entrepreneurs can increase their span of action through diverse personal networks and acquire support and resources that would be otherwise unavailable.

Li and Bernhoff (2008) consider the importance of online social networks in their analysis. According to their argument, changes in online behaviour have created a social trend in which people are using technologies to get the things they need from each other, rather than from traditional institutions like corporations. They refer to this social trend as the ‘Groundswell’. In this respect the ‘Groundswell’ has changed the balance of power in such a way that individuals are now shaping the economy by increasingly relying on themselves to produce, market, and distribute products just like traditional corporations did in the past. Furthermore, this argument suggests that this ‘Groundswell’ is an unstoppable trend which threatens the success of those businesses which do not incorporate it as a part of their business strategy.

To better take advantage of the social networks, Li and Bernhoff (2008) created a social network profile (Techno graphics profile) which allows businesses to classify individuals based on the Groundswell activities in which they participate. This profile enables businesses to better understand how social technologies are being adopted by any group of people. With such information businesses can then examine and create targeted strategies based on the tendencies of individuals within the ‘Groundswell’. The profile classifies individuals in a hierarchical arrangement according to their involvement in social networks. This hierarchy begins with
creators at the top followed by critics, collectors, joiners, spectators, and inactives. Creators are individuals who at least once a month publish a blog or article online, maintain a webpage, or upload videos audio to sites. Critics react to online content by posting ratings, reviews and comments on blogs or online forums. Collectors are those who organize the content created by creators and critics by collecting and aggregating information. Joiners participate in or maintain profiles on social networking sites. Spectators consume what all other produce – blogs, online videos, podcasts, forums and reviews. Finally, inactives are simply nonparticipants.

Despite the aforementioned arguments, other studies indicate that there might not be a link between social networks and business success. A notable example is presented by a survey commissioned by Citibank and which was conducted by GfK Roper (Whitney, 2009). The findings, based on interview of 500 executives running businesses with fewer than 100 employees, show that 86 per cent of executives questioned have not used social-networking sites to pursue business advice or information. Further, 79 per cent of executives found social networking sites to be of little help in finding new business leads. These small businesses reported using tools other than social networking to promote and grow their business including reliance on their own website to generate leads, e-mail marketing, and online advertising. In their analysis Citibank executives argue that this survey suggests that small business owners are still feeling their way into social media as a means to grow their business, and that such businesses may also not have the necessary manpower or time required to take advantage of social media.

An important caveat to the arguments that social networks improve business success is that the beneficial effect that social networks may provide can only be gained by companies that have the sufficient flexibility and capacity to absorb the information into their own business constructs (Cohen and Levianthal, 1990). Therefore factors such as available resources,
education, entrepreneurial experience, and social competencies determine how much benefit an entrepreneur can derive from existing network ties. Further, the entrepreneurs’ opportunity for success is also dependent on the characteristics of their personal social network. In this respect, factors such as size, network density, strength of ties, and network redundancy determine the potential of a personal network to provide resources to entrepreneurs (Aldrich and Zimmer, 1986).

**Research question**

The analysis should be able to identify whether small businesses, in whole or in groups, have been able to lever social networks to increased chances of survival or higher levels of growth. Society seems to presume the positive connection, but earlier studies on internet usage showed considerable lags in adoption by SMEs, which inferred that the costs/benefits to adoption were connected to considerable economies of scale.

**Methodology/Key Proposition**

The analysis will be able to control for business sector, size of employment, years in business and region, while also controlling for owner age group, and gender.

\[
\text{Performance.} = f(SN\text{-tools, SN\text{-}behaviour, Owner\text{-}characteristics, Business\text{-}characteristics}) + e
\]

We are under no illusions that this model can perfectly predict business performance. There are simply too many immeasurable qualitative influences (and random ones) that drive these kinds of results. Variable and model specification errors are also highly likely because they are each necessarily too crudely defined to give accurate enough results. All we are hoping to show is through a simple OLS multiple regression, we can test whether social networking activity is positively correlated with business performance—accounting for basic owner and business
characteristics. If there are strong levels of correlation, we can infer that more intensive use of social networking can bring positive and lasting benefits to businesses. If the relationship is weak, however, while social networking may still be of value, there may be seriously unproductive aspects to it that can divert business owners’ attention from more important tasks of running a business. Business owners’ time is valuable and workweeks typically average 50 hours or more. Any activities that can productively allow business owners to save time would be a benefit. Conversely, any activities that take a lot of time, but don’t deliver tangible performance results should be put on the chopping block.

**Available Information**

The data come from two separate surveys of CFIB-member owners of SMEs in Canada. The social networking profile came from a broader marketing research survey conducted in July 2009. In total there were 6,840 respondents. The business performance responses come from CFIB’s monthly survey of business expectations. Although there are data that go back as far as September 2008, we chose to limit the results to the June 2009 to March 2010 period so that the massive business cycle disruption from the past recession did not swamp the analysis. An important point about these data is that each monthly group of respondents is typically unique and independent from the next. The overall sample set rotates every six months. Because the survey sample frame is longer than six months, there are some repeat respondents. In these cases, we removed the second (later) response. In total there were 8,928 unique respondents for this period. Both surveys are non-anonymous, in other words, we know the identities and business profiles of each respondent, who is keyed by a unique membership number. The demographic and business characteristics data came from CFIB’s database, where
membership records are checked and revised annually. The merged dataset resulted in 1,942 respondents who had responded to all relevant questions on both surveys.

**Business Performance:**

The question of how to measure business performance is by no means trivial. In the macroeconomics world, analysts focus on aggregate measures of profits, value added or employment levels to gauge business performance. In the micro sense, or from the perspectives of business owners themselves, the range of performance measures used is much wider. For example, individual business owners may consider survival a key measure of success—particularly at the start-up stage. Other objective measures can include sales levels, debt coverage, profits, net value, and market share. Performance can also be a subjective measure, covering an owner’s satisfaction with their general state of affairs. CFIB’s economic analyses recognize that no single performance measure is suitable, and employing a multiple of methods is too onerous to collect. Our traditional approach has simply been to ask business owners perspectives on past, present or future ‘performance’, implicitly leaving it up to them to define performance their own way. The approach has been quite successful. Since 2000, when CFIB started asking this form of question in a quarterly survey, aggregate results on expected performance 12 months into the future actually tracks very closely with the current rate of real GDP growth. The relationship actually got stronger once CFIB switched to a monthly survey format (see Figure 1). The focus has been on building a good relative indicator of the economy rather than an absolute measure. While it is well understood that a one-year horizon is appropriate for planning purposes, it is too distant to be a good forecast horizon for SMEs. Shorter term forecasts, however, we found to be too influenced by seasonal business influences, which reduce the correlations with macroeconomic measures. Twelve-month future performance
therefore can be considered a good proxy of *dynamic* performance, that is, a measure of the change in business health compared to current levels. The actual question construction is quite simple for survey respondents to deal with and analysts to evaluate:

**How do you expect your firm to be performing in 12 months compared to now?**

1. Much better
2. Somewhat better
3. About the same
4. Somewhat worse
5. Much worse

For the purposes of CFIB’s monthly Business Barometer series, the results are transformed into index form. The top two response percent distributions are each given a 100 percent weight, while the middle distribution is given a 50 percent weight. The range of possible index scores ranges from 0 to 100, with 50 as the balancing point.

**Figure 1: CFIB Business Barometer® Index and GDP Growth**

![Chart showing CFIB Business Barometer® Index and GDP Growth](image)


For the purposes of this analysis, however, we left the data in its original form, except for assigning response scores ranging from 1 (much worse) to 5 (much better). See Figure 2 for the distribution of responses.
CFIB’s economic analyses, however, did not want to simply rely on a single measure of performance. When we first started to build a monthly series for the first time, we did not know how closely this measure would track GDP. To hedge our bets, we also prospectively built a second measure, based on OECD and EU analyses of business cycle surveys, which is more of a static definition of performance. Quite simply it asks business owners to grade the current state of their business. Here, we simply use a three-point scale:

Currently, what is the general business situation of your company?
1. Good
2. Satisfactory
3. Bad

The series, while published since February 2009, is still too new to become part of the Barometer. But if it adds explanatory power and creates a better correlation with GDP growth, then it will be added once there is sufficient statistical justification. For now, we can use it for this study. Interestingly, to date, this series shows a high degree of stability in its first 14 months of life. It is not highly sensitive to monthly variations (see Figure 3). This will help in ensuring a relatively stable measure during a particularly volatile part of the business cycle. The downside, however, is that the series may prove to be insensitive to cross-sectional variables as well.
Among the merged sample set, almost 36 percent of respondents said their business was in ‘good’ shape, while just over 45 percent said it was ‘satisfactory’ (see Figure 4).

**Figure 4:** Endogenous variable 2, current state of business, June 2009 – March 2010 aggregate results (percent response)

**Use of Social Networking**

To construct a picture of Social networking use among SMEs, CFIB conducted a survey in July 2009. The data captured included business use of Internet, usage of social networking tools such as Facebook, Twitter, LinkedIn, etc, as well what type of business networking they engage in. The latter series of questions was built in line with, but not identical to, Forrester’s analysis of business social networking. The questions were worded as follows:
Q10: There is currently a great deal of interest in online social networking. If applicable, which ones do you use? (Select as many as apply)
   a. MySpace
   b. Facebook
   c. Twitter
   d. YouTube
   e. AgentSolo
   f. LinkedIn
   g. Product or industry-specific discussion boards
   h. Other___________
   i. None of the above, do not use (skip to Question 12)

Q12: Which of the following business-related activities do you participate in? (Select as many as apply)
   a. Attend association or networking meetings, conferences, tradeshows
   b. Read online blogs, forums, customer reviews
   c. Watch online videos and podcasts
   d. Participate in webinars, online courses
   e. Subscribe to automatic email notification tools (e.g. RSS)
   f. Make comments in forums, post ratings and reviews of products and services, or add ‘tags’ to interesting web pages
   g. Publish a blog or upload stories, videos, podcasts, etc.
   h. None of the above

We constructed a flag variable from Q10 above by subtracting the flag response to option 10i from 1. The flag variable therefore represents 1 for respondents who use any of the social networking tools listed from 10a to 10h, and 0 for respondents who use no online social networking tools. In the merged data set, 30.9 percent of respondents use one or more online social networking tools (see Figure 5).

From Q12 above, because it allows for multiple response, we constructed seven flag variables each corresponding to responses 12a through 12g. To eliminate the possibility of multicollinearity, the reference variable excluded from the model, therefore, becomes the non-networker respondents (Q12h). Here, the responses vary considerably, with lower frequencies as one gets higher up in the hierarchy of social networking sophistication. While 59.0 percent of respondents actively network in person at meetings, conferences, tradeshows, etc., only 7.6 percent add their own comments to existing sites and 3.2 percent are at the high level contributor
level by posting their own blogs and other online content (see Figure 6). Among the networking behaviors in between these extremes, roughly one respondent in four actively partake as a reader or viewer of networking content.

These eight variables therefore represent the heart of the analysis of whether social networking activity actually influences business performance—one variable for the tool(s) used and seven variables for the extent of their networking behavior. All the remaining variables in the model are meant to control for owner demographic and business profile influences (see Figures 7 through 11). These include:

- Business owner age
- Business owner gender
- Business owner response method (online or mail)
- Business size (employees)
- Business sector (based on 4-digit NAICS)
- Business age (years)
- Business setting (urban-rural)

We used a log function to construct the business size and age variables. Age is delineated by 6 groups, while all the remaining variables are flags. The survey response method is meant to capture an additional sense of a business owner’s comfort with online technologies. The communications survey was delivered to each sample member twice, once by email and once by mail—and respondents were free to choose how to respond. It should be noted that the business outlook survey is only conducted online, so the merged data set would somewhat tilted toward more active online participants—perhaps decreasing the potential explanatory power of this variable. The reference industry used in the analysis is deemed to be the retail sector—about 20 percent of the merged sample—so its flag variable is excluded from the model.
Figure 5: Exogenous variable, business owners’ use of online social networking tools, July 2009 (percent response)

- Facebook: 19.9%
- YouTube: 9.0%
- LinkedIn: 5.6%
- Twitter: 2.8%
- MySpace: 1.1%
- AgentSolo: 0.2%
- Industry, product discussion board: 7.0%
- Other: 2.2%
- Any of the above: 30.9%

Figure 6: Exogenous variables, business owners’ networking activities, July 2009 (percent response)

- Attend networking meetings: 59.0%
- Read online blogs, forums, cust. reviews: 23.9%
- Watch online videos and podcasts: 20.4%
- Participate in webinars, online courses: 26.5%
- Subscribe to auto. notification tools (RSS): 24.8%
- Add comments to forums, post ratings, tag: 7.6%
- Publish a blog or upload videos, podcasts: 3.2%

Figure 7: Exogenous variable, business owners’ age groups, July 2009 (percent response)

- Age 18-24: 0.3%
- Age 25-34: 4.5%
- Age 35-44: 17.5%
- Age 45-54: 37.2%
- Age 55-64: 31.3%
- Age 65+: 9.2%

Figure 8: Exogenous variable, business employment size, July 2009 (percent response)

- 0-4 empl: 35.6%
- 5-19 empl: 43.3%
- 20-49 empl: 14.0%
- 50-99 empl: 4.9%
- 100-499 empl: 2.1%
- 500+ empl: 0.2%
Regression results

The simple regressions were performed twice, one each for the dependent variable. Of these, the regression that used the 12-month expectations measure was a far superior model. As suspected, the lack of a meaningfully observable relationship between ‘state of business’ and other measures of the business cycle appeared to show a lack of relationship to other factors as well in Regression 2. The only significant drivers were found to be age group (younger), survey response method (web) and industry sector. The suspicion is that the scale measure ranging from ‘good’ to ‘poor’ varies over time and relative to businesses in different
situations. Therefore, although none of the social networking variables were strongly correlated, we believe the fault lies more with the dependent variable rather than any independent variables.

Because the dependent variable used in Regression 1 has been proven to be a good indicator of macroeconomic performance (GDP), we have higher confidence in the relationships it reveals. We are not surprised by the overall goodness of fit. The adjusted R-square of only 0.052 shows only 5 percent of the variation in business expectations is explained by the other 27 independent variables. As we had stated above, business performance is too complex a concept to predict with a small number of basic indicators. Overall, we find eight statistically significant correlates, of which five are not simply related to business sector.

In each case, the sign and strength of the coefficient reveals some meaningful results. On the demographic side, it is apparent that younger businesses and younger business owners have some effect on the results. Cross-tabbed results on business performance by demographic group have always revealed an inverse relationship with age and business expectations, and it is no real surprise to see in the results that people earlier in their business ownership lifespan are more positively oriented. The regression not only shows that this effect survives the inclusion of other demographic variables, but is also allows both measures to be statistically significant at the same time.

Table 1: Regression cases

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<th>Regression 2:</th>
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<td>Dependent variable</td>
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<td>Dependent Variable: 12-month expectations</td>
<td>Dependent Variable: current state of business</td>
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<td></td>
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** Significant to 5 percent level
* Significant to 10 percent level
It is the social networking variables, however, that is the real subject of our attention, and Regression 1 reveals defensible results. Three measures stand out: In-person attendance at networking meetings, conferences, etc., participation in online courses, and blogging. These represent the extreme low, high and midpoint of the social networking ‘Groundswell’ hierarchy. At the basic level, the results show that networking, at its root, is important for business success—but that its online nature is less relevant. The results reinforce the value of networking in person. It is difficult to replace this kind of interaction online, except in specific circumstances. Of these, online learning is an ideal application for businesses in a direct sense, and that any time spent taking courses or participating in webinars can be seen as high-value activities. The Net has opened up education and accreditation options never available before to business owners—people who rarely have had the time or the flexibility to attend traditional classroom sessions, or are too small to command one-on-one meetings with industry experts, or too remote or tied to their business location to travel frequently. At the upper end of the social networking spectrum, we also see a small group of content contributors positively correlated with business success. Here, the causality may be reversed—successful business owners who develop an online following and who are in a position to raise their profile further.

What these results also tell us is the weak or non-existent relationship with the more generalized aspects of social networking. For example, use of Facebook, Twitter, YouTube and other tools has next to no generalized association with business growth expectations (in fact, the coefficient is negative). We see the same with notification tools, making comments to forums, and reading online blogs and reviews. Although some of the information passed this way can be of value, it has to compete with a far greater volume of information that has low relevance to the business. Time spent at these activities by business owners is much more likely to be
unproductive. This is not to say that social networking sites like Twitter, Facebook and others offer no value to small businesses. They offer marketing benefits that can potentially and significantly raise the profile and brand awareness of individual small companies. But achieving buzz is a hit and (mostly) miss affair. Not all small businesses have brands to lever effectively in the way that global brands can. And, most SMEs are too narrowly defined by sector, product or region to benefit from the global nature of online social networking as an outward business development strategy.

The results suggest that at this stage where relevant, social networking tools and activities are better at filtering and amplifying the inflow of information for small businesses. Nonetheless these findings are based on lumpy data and a simple model structure. A caveat to our analysis is that our data, which examined a six month time frame, did not allow for an investigation into the effects of social networking on the business survival. As always, there will be considerably more to learn in more targeted analyses.

**Conclusion**

Employing the appropriate form of social networking tools in business strategies is an important ingredient in the formula for business success. In particular, corporate social networking strategies offer solutions and knowledge transfer to business owners in a collaborative fashion. Whether through in-person collaboration as is the case with networking meetings, or online interactions in the form of online courses, social networking has opened up new sources of information that business owners can use to enhance their business. Results, however, indicate that a greater link between social networking and business success exists at the in-person level than the online level. As such, while online social networking has had great impact on personal communications, its effect on the businesses is less relevant. While the
emphasis of our analysis did not touch upon the effects of social networking on business survival, it is an aspect that needs to be further studied.
Bibliography


THE CONTRIBUTION OF SMALL BUSINESS RESEARCH TO ECONOMIC POLICY IN THE U.S.

Bruce A. Kirchhoff

Abstract

This paper provides a summary of the research on small business job creation and describes how it has affected U.S. government economic policy regarding job creation. The methods being discussed for implementing these policies are over simplistic and this paper proposes that another model of small business be adopted to guide government policy.

Introduction

On July 9, 2009, the Washington Post published an article beginning with the sentence, “One of the most enduring lies in American politics is the myth of small-business job creation.”\(^1\) This statement reflects a growing dissatisfaction of public policy makers with the hypothesis of small business creates the majority of net new jobs.

The purpose of this paper is to explore the academic research literature on small business and its influence on economic policy in the U.S. This academic literature has been at the forefront of the publicity of public policy regarding job creation and economic growth in the U.S. The importance of this research to public policy today is waning as noted in the Washington Post. And, it is not at the forefront of many other nations. Other nations have provided academic research that suggests the U.S. evidence of small business’s contribution to economic growth is not appropriate for them. The issue addressed herein is that entrepreneurial start up businesses are typically small, these are the major job creators because their successes become large very quickly but choice of which of the many small businesses can be expected to grow.

I begin this paper with a brief chronological review of the small business research that underlies the small business influence on public policy for economic growth. I offer no new data for analysis but only review the past research. By and large, the past research is very well done. I review the oldest research first as a mechanism for revealing the commonalities that allow the

formation of a small business definition. I then provide my definitions of small business in the U.S. derived from the early research. Next I review the academic research literature to expose its commonalities that fit my definition. I then review several research articles that are typical of those that contradict the U.S. beliefs about small businesses. I conclude with suggestions for recognizing the underlying assumptions that drive the U.S. focus on small businesses as a basis for economic growth and recognize how this greatly affects the direction of future public policy.

The Early Development of the Theory of Small Business as the Creator of Job Growth

In 1979, David Birch prepared a research paper in which he provided evidence that his analysis showed that small firms created the most net increases in U.S. jobs over the period of 1968 through 1976. His data was assembled from basic individual firm information from Dun and Bradstreet.²

It seems important to the evolution of this area of research to describe the data base used by each researcher. Until 1996, there was no data base in the U.S. that stored individual firm data that was linked longitudinally. The U.S. Bureau of the Census reported data every year on employment but it was classified by size groups and each year of data did not have a unique identifier attached to every firm. Thus, it was not possible to track a specific firm over time so as to measure its growth or decline. Birch recognized this and therefore went to Dun and Bradstreet and obtained their annual file on all the firms which were identified by a unique “Dun’s number.” Thus, by linking Dun’s numbers year after year, he was able to assemble the change in each individual firm’s status longitudinally from 1968 through 1976.³

However, few economists believed his results because (1) they did not believe Dun and Bradstreet had quality, reliable data, (2) that the data did not accurately represent the real world of businesses and (3) that his results contradicted the Bureau of Census published classified employment data where the largest class of firms reported the greatest number of net new jobs annually. However, in spite of the wide spread view that Birch’s work was not quality research, in 1980, the U.S. Small Business Administration through its Office of Advocacy began to de-

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³ Ibid., Birch 1979
velop its own Dun and Bradstreet database to test Birch’s methods. The results for 1978 to 1984 were published first in 1989. Subsequently, a book detailing the finding of the data analysis for years 1978 through 1984 was published in 1995. This book explains SBA’s data analysis research, its meaning in terms of economic theory and its implications for economic policy. It also validated Birch’s way of using the D&B data by finding similar results as Birch found in his research. And SBA’s longitudinal analysis of 1978 through 1984 yielded the same radically different measures of net new job creation by size of business as that reported by Census’ analysis of its newly developed longitudinal data developed beginning in 1996.

In 1991, SBA had cancelled the D&B database assembly and research. Shortly thereafter, SBA’s Office of Advocacy, in response to the growing interest and controversy regarding small businesses and job growth agreed to finance the Bureau of the Census to create a longitudinal database. This database used the existing data drawn from surveys and Censuses of Business from 1986 and continuing this with the data as collected beyond 1986. This became a database now called the U.S. Census Bureau’s Business Information Tracking Series (BITS). It now consists of annual data from 1986 through 2008. Additional years are continuing to be added and individual firms are followed longitudinally using the employer identification numbers. This data base provides the primary data for job creation research since 1996. Among Washington economists, it was more comprehensive, reliable and respected than D&B data.

SBA’s additional financing resulted in Census hiring several research personnel that focused primarily on the creation and use of this data. Thus began a series of criticisms of the Birch and SBA’s earlier work and a rejection of the small business job creation hypothesis. The researchers initially changed the definition of business size used by Birch and SBA in their re-

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4 The author of this paper was Chief Economist in charge of the data base development in 1980 and 1981.


7 It seems useful at this point to mention that data on businesses is reported in two different ways. An establishment is a place where work is performed. A firm is a business owner that may or may not have multiple establishments. For example, Walmart is a firm that has many, many establishments most of which are retail stores.
search. SBA assumed the existence or formation of a business that was small provided an appropriate definition of business size, and this size definition remained unchanged through the period of analysis. Employment in each business was report to the total using this definition of businesses size over the years used in research. Thus, if a business started with ten employees and grew to 800 employees in five or six years (think Cisco) it was identified as a small business with growth adding 790 employees to the work force.

The Bureau of Census researchers believed that this was wrong. Once the business grew past 100 employees, it became a large business that added 690 employees there by adding to the jobs created by large businesses. So this meant that the definition of size changed the designation of size based on the firm’s size in each year rather than at the beginning of a series of years. Moreover, the researchers claimed that “regressions to the mean” was probably a problem with the methodology used by Birch and SBA in earlier research. Using their methodology, they calculated that small firms did not create he majority of net new jobs and that large firms were the major contributors to job growth.8

**Research Literature Since 1996**

In response to the Census researchers’ arguments, Statistics Canada created a longitudinal data file of Canadian companies using the same rules regarding the definition of business size used by SBA and the methodology of analysis of longitudinal data as used by the U.S. Census researchers. The Canadian research showed results similar to those taken from SBA’s research and different from that produced by the Census researchers. And, Statistics Canada also tested for regression to the mean and found none.9 But, this activity created a burst of new interest in small business and job creation research.

Two arguments stood in the way of accepting small businesses as job creators. First, all researchers found that less that 50 percent of start up businesses survived more than four years so how could the remaining 50 percent create all the net new jobs? Second, most start up business


are small low innovation businesses that do not hire only a few employees to start and none after they have started. So how could the remaining few create all the net new jobs.

Brian Headd addressed the survival issue by using the U. S. Census Bureau’s Characteristics of Business Owners (CBO) survey in 1996. The survey asked owners of recent start up and now closed firms whether their business was successful at closure. Headd found that 29 percent of managers of closed businesses said the business was successful at time of closure. That is 29 percent of the 50 percent that closed or 15 percent of all businesses in the population of start ups. Adding this 15 percent to the 50 percent that report survival for four or more years yields 65 percent of successful businesses for four or more years. This is almost 2/3rds of the start up businesses are successful at four years. This is a substantially larger survival rate than considered in the past suggesting that the number of survivors might be adequate to create many new jobs.

Second, what is the proper way to measure the size of business over a period of time. If one examines this growth phenomena more carefully, it is clear that only a small percentage of start up businesses create the majority of the net new jobs. In fact a very thorough review of research literature clearly identifies this fact as a major issue to be explored. I examined this fact and created an analytical scheme to explore this is more detail and it shows that job creation by start up firms is spread among both highly innovative and lowly innovative start up businesses. This requires a major change in the public policies being discussed and implemented in the U.S. today. This is the topic of the next section.

**Dynamic Capitalism**

Dynamic capitalism is a term I created to describe the changing nature of the business community of the U. S. These changes are huge among the ranks of small businesses even though the domination of the economy by large firms largely obscures this vital section. Yet, the data consistently shows that most of the job increases come from the small business sector.

The research Bruce Phillips and I did in the 1980s and 1990s yielded a great deal of useful information. Since it was done on SBA’s Small Business Data Base (SBDB) derived from Dun and Bradstreet data this information has largely been ignored. However, recent analysis of the BITS data has shown that results from the SBDB data are very similar to results from the

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BITS analysis. Most recently, the survival rates calculated on BITS are almost exactly the same as we calculated from the SBDB twenty years ago. This increases the likely hood that not only are SBDB research measures correct but the U.S. survival rates are relatively unchanged for twenty years. Since the two sets of research data do not overlap, it is not possible to conduct any additional tests.

Currently, it is clear that public policy is focused on highly innovative small start up small firms. However, it is essential that researchers recognize that all highly innovative small start up firms are not equal and that low innovative start up firms are not equal. This is best explained with two dimensions: rate of innovation and rate of growth. This can be displayed as a two by two matrix as shown in the figure below.

![Dynamic Capitalism Typology Diagram](Image)

The rate of growth can vary from low to high and the rate of innovation can vary from low to high. This creates four sectors within the population of small start up businesses

**Economic Core** Let us begin with the ECONOMIC CORE. This is the residence of the vast majority of small businesses. Typically, these are small retail stores, drycleaners, auto repair shops, restaurants, plumbers, etc. Most of us interact with these businesses on a daily basis.

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11 This diagram is taken from Entrepreneurship and Dynamic Capitalism, published by Prager in 1969. All rights are held by Bruce A. Kirchhoff. This diagram may not be reproduced without the expressed consent of Bruce A. Kirchhoff.
These businesses perform services or supply products and are an important part of the American economy. They employ slightly over half of the U.S. workforce. While successful, that are not aggressively seeking new and different ideas that may risk their business security. These businesses create few and perhaps no innovations during their life. There are over 27 million such small businesses in the U.S. However, these are not great job creators since they seek little growth over time.

**Ambitious Businesses**  Ambitious businesses do not create many innovations but they do seek and achieve growth. These businesses have at least one major innovation that gives them the power to create growth. However, they do not have major research and development efforts and so they use their major innovation to achieve growth.

Walmart is such a business. Walmart began with an innovative approach to selling products at discount retail in rural county capitals in the midwest. However, in the early 1970s, Sam Walton decided that the way to increase his return on assets was to reduce his assets. Since WalMart’s biggest asset was inventory Sam looked for technology that would help reduce inventories. By 1974, Sam had acquired the largest installation of IBM computers of any business organization in all the U.S. And WalMart leased a transponder on a earth circling satellite to link all WalMart stores to the central office every night to control inventory on a daily basis. This was the innovation that rocketed WalMart to become the largest retailer in the world creating hundreds of thousands new jobs. WalMart also has created other smaller innovations since but none of these innovations had the impact of daily computerized inventory control. The other major retailers in the 1970s -- for example,K-Mart and Sears -- failed to follow WalMart until much later and suffered decline.

WalMart is not the only retail organization that developed a major innovation early and built a growing firm from the one or two major innovations. McDonalds, Pizza Hut, and other food service firms used their initial food service system innovations to grow rapidly. Dell’s innovation was to market computers via telephone and direct mail. It has built a major business based up the gradual improvements but it still uses telephone and internet access although internet access is faster than mail. This is essentially the same communication system for buying
Computers and others have copied it. But it has grown very large even though Dell has not developed any other major innovation (it looks to it manufacturing suppliers to innovate.)

Ambitious businesses create and grow on the basis of one or a few innovations. None have a record of major innovations after the first one. These are ambitious businesses.

**Glamorous Businesses** These businesses are well known as their continuous development of new innovations are the subject of regular press releases and stories in many publications. Cisco, Apple, Intel, Hewlet Packard, and many others have a continuous flow of inventions. These inventions have allowed them to emerge from small start up technology companies and serve as examples of how technology start ups can become major job creators. Such firms, the experts argue, should be assisted through their early days so as to stimulate the economy through job creation. Technological invention through research and development is the basis for their success and this success creates new jobs. Technologically innovative companies are seen as the major source of future job creation in the U.S. However, not all technologically innovative start-ups that have a major invention succeed. The steps from invention to commercialization can be a major barrier and a constraint on growth.

**Constrained Growth**

Constrained growth businesses are unquestionably the largest part of start-up technology firms. Such firms begin with a single attractive invention. However, they fail to achieve significant commercial success with the invention and fail to create a stream of other inventions but fail to achieve commercialization. Their success is constrained by some factor or factors regarding the development of new inventions. These constraints can be external or internal in origin.

External constraints typically are in the form of inability to find adequate financing; this is especially true during periods of recession such as the U. S. has had since early 2008. Also, it can be very difficult to find appropriate personnel. A marketing expert is needed to commercialize an invention but may be difficult to find. And, suppliers of required components or sub-assemblies may be unwilling to advance credit.
However, most constraints are internal. Inventors frequently are frequently unable to realize that they are not knowledgeable in marketing. And, they are unwilling to commit the available resource (i.e. stock or stock options) necessary to hire a competent marketing person. Although there may be friends, family or others who are interested in helping the company, the inventor may not be willing to sell stock for fear of losing control of “his” company. The inventor finds that commercial lenders are unwilling to lend to the struggling company usually for good reasons. So outside funding is nearly impossible to find. Growth slows to a crawl.

Simply stated, inventors are not good investments and the business fails for lack of resources. If the invention appears to be valuable, someone or some organization may buy the invention and eventually create a successful business. Constrained growth technology businesses are far more common than successful start up technology businesses.

CONCLUSIONS

The prevailing public policy clearly places emphasis on government financial support for start up small businesses. This is not completely wrong but dynamic capitalism clearly describes that reliance on all small businesses for job creation is not wise. The government support programs that now exist are probably adequate for the economic core. On the other hand, Dynamic Capitalism also shows that government programs that focus solely on high tech start up small business are not adequate for those low tech ambitious businesses that may have a major innovation that could create a high growth business and many new jobs. Government assistance should be allocated to these firms along with the glamorous high tech start ups.

Clearly, dynamic capitalism shows that government programs of assistance to glamorous technology based start ups are necessary for the future growth of the U.S. economy. However, existing government programs may be adequate but should be examined to see if they can be expanded. On the other hand, some constrained growth technology start-up firms may now be receiving government assistance that should be allocated to other technology start ups. It is very difficult to determine whether a start up technology firm will be constrained by internal factors. Thus it may take several years of government support to discover the irresolvable internal constraint problem. Providing continued external assistance to such firms is a loss of resources that other start ups could use. For example, an incubator has limited space for new firms. If one tenant is clearly internally constrained, it should be asked to leave and a new firm can enter.
ernment loan assistance programs should be very careful about lending to start-ups that appear to be internally constrained. The need in the U.S. is for ambitious high growth low innovation businesses along with high growth glamorous technology businesses. It is worth while to assess every start up business early in its struggle to determine if it may be a glamorous or ambitious business and direct government support programs to these firms.
Public Policy Measures to Revamp the Competitiveness of the Puerto Rican Economy:

A Benchmarking Approach

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According to the Global Competitiveness Report, the Puerto Rican economy occupies a distant 42nd place from its main trading partner – the U.S. - and behind its major counterparts Singapore, Ireland and Chile (WEF, 2008). A three-tier economic development program has been proposed by local policymakers to include a fiscal reform, an infrastructure development program and a knowledge-based economy with an export orientation. This study benchmarked the strategic measures taken by Puerto Rico’s close competitors as a validating mechanism of the proposed measures to restore the competitiveness of the Puerto Rican economy. The results suggest an aggressive realignment of Puerto Rico’s public policy to strengthen its institutional framework, the macroeconomic environment, and the quality of the infrastructure.

Keywords: competitiveness, economic development, public policy,
ENTREPRENEURIAL ATTITUDES OF ARTS AND BUSINESS STUDENTS

by Lloyd G. Gibson and Regina A. Gibson

Abstract

Research into the entrepreneurial attitudes of business and arts students can have important implications for the marketing and efficacy of entrepreneurship education and initiatives. However, few studies have considered arts students who are increasingly venturing into entrepreneurial enterprises or entering university-sponsored entrepreneurial programs. This study determined the significance of factors influencing the entrepreneurial attitudes of both arts and business undergraduate students at a small mid-Atlantic liberal arts university. The survey (N = 321) used attitudinal constructs from Robinson and Hunt’s 1991 entrepreneurial attitude orientation model. Results indicated that for both business and arts students, student characteristics and entrepreneurial experience were found to be significantly related to certain entrepreneurial attitudes, and in some cases, arts students scored higher than business students. In particular, arts students with their own businesses or who had taken at least one business course had significantly higher entrepreneurial attitudinal scores than business students.

Introduction

Interest in entrepreneurship education, especially for business students at the undergraduate level, has been rapidly growing, and consequently, the entrepreneurial attitudes or intentions of business students have been the subject of several studies (Harris, Gibson, and Taylor 2007; Harris, Gibson, Wang, Barber, and Orazov 2009; Kerrick 2008; Wilson, Kickul, and Marino 2007). However, few empirical studies have been performed relating to the factors affecting the entrepreneurial attitudes of non-business students, in particular, visual arts and performing arts students who are increasingly

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venturing into entrepreneurial enterprises and who are entering university-sponsored entrepreneurial programs tailored to their needs (Beckman 2007).

As arts entrepreneurship programs are emerging in higher education, some of these programs are attempting to tailor entrepreneurship classes for the arts industries. These programs include the following: (a) the University of Arizona-Camarata Career Development Program, (b) the Eastman School of Music's Arts Leadership Program, (c) the Maryland Institute College of Art professional development curricula, (d) the University of Colorado at Boulder Entrepreneurship Center for Music, as described by Beckman (2007), (e) Montana State University artisan entrepreneurship program, (f) the Trinity College Crafts Program (Gose 1997), and (g) the numerous universities which incorporate business courses, such as FastTrac (Falon 2005), into the arts curriculum. This wide variety of arts entrepreneurship programs begs the question as to what factors would be most important in motivating visual and performing arts students to become entrepreneurs and what programs would be most effective.

Several factors have been suggested as predictors of entrepreneurial intention. Recent studies of business students (Harris, Gibson, and Taylor 2007) suggest that an entrepreneurial perspective can be developed in business students, and this perspective can be enhanced by the development of positive attitudes encouraged by entrepreneurship education. The Harris et al. studies utilized the Entrepreneurial Attitudes Orientation (EAO) model developed by Robinson, Stimpson, Huefner, and Hunt (1991). The EAO model, which is theoretically well-grounded, measures attitudes by four different subscales (achievement in business, innovation in business, perceived personal control of business outcomes, and perceived self-esteem in business). The results of the Harris et al. studies showed that scores on all four of the entrepreneurial attitudes increased as a result of the students’ completion of a semester-long Small Business Institute course.
This result suggests that if entrepreneurial education strengthened the entrepreneurial attitudes of business students, then perhaps the same result could be experienced by visual and performing arts students in an arts entrepreneurship program. It should be pointed out, however, that Harris and Gibson (2008) also determined that other factors, such as gender and family business experience, played an important role in predicting entrepreneurial attitudes.

To date, no studies using the EAO Model have been conducted with visual and performing arts students as a participant base. The purpose of this project was to identify and compare the demographic and other factors that relate to or influence entrepreneurial attitudes in undergraduate business students and visual and performing arts students. If the factors which influence entrepreneurial intention are known, then a college or university could utilize this information to develop and market entrepreneurial programs to both business and arts students.

Literature Review

The entrepreneurial attitudes or intentions of undergraduate students have been the subject of several cross-campus and business student studies. An examination of self-employment and a graduating class of 1993 (Moutray 2008) revealed that undergraduate business students are either less likely or not significantly different than students in other majors to have entrepreneurial intentions, and that entrepreneurs can emerge from wide variety of majors. A recent empirical study (Shinnar, Pruett, and Toney 2009) of both business students and non-business students also showed that interest among non-business students suggested a significant opportunity to offer entrepreneurship education to non-business students. However, although students in this study represented a variety of disciplines in and outside colleges of business, a comparison of the factors which would influence the aspiration to become an entrepreneur was done for business students and non-business students, with no focus on the individual majors of the non-business students.

Cross-campus studies also included a study by Harris, Gibson, and Taylor (2007) which surveyed students from six universities, with management majors comprising 54 percent of the sample
population. This study showed that the students’ completion of only one course in a Small Business Institute program had a major impact on the students' entrepreneurial attitudes. Other cross-campus studies also advocated entrepreneurial education. An empirical study of 106 students at the Technical University of Catalonia (UPC) in Spain (del-Palacio, Sole, and Batista-Foguet 2008) reviewed student evaluations of the university’s entrepreneurship center which had been developed to promote the entrepreneurial attitudes of students, educators, and professionals. Analysis of the evaluations showed that the UPC students perceived that both the center’s teaching and courses were of high quality.

Studies of the entrepreneurial attitudes of business students still continue to dominate the literature, since most university entrepreneurship courses appear to be developed for the interests and needs of business students as opposed to other students in other disciplines (Brkic 2000; Beckman 2007). These studies include a recent study by Wilson, Kickul, and Marino (2007) comparing the attitudes of students working toward a masters degree in business administration with the attitudes of adolescents. However, there are studies in the literature focusing on the entrepreneurial aspirations of students in non-business majors which have compared their aspirations with those of business students. As early as 1991, Robinson, Huefner, and Hunt had included both undergraduate psychology and business students in their study using the Entrepreneurial Attitude Orientation (EAO) model in order to measure factors affecting entrepreneurial attitudes. Souitaris, Zerbinati, and Al-Laham (2007) have also included science and engineering students in a more recent study, showing that entrepreneurship education also increases the intention of these students to start a business. In addition, Kerrick (2008) recently has compared the entrepreneurial intention of both education students and business students, showing that both education and business majors had intentions to become entrepreneurs.

**The Entrepreneurial Attitudes Orientation (EAO) Model**

The model that has been most recently related to the prediction of entrepreneurial intention or aspiration is the Entrepreneurial Attitudes Orientation (EAO) model which is based on prior research on personality, demographics, and entrepreneurship (Robinson, Stimpson, Huefner, and Hunt 1991).
According to Harris and Gibson (2008), this model, by using an attitudinal approach, increases the correlation with actual behavior and reduces unexplained variability.

As mentioned previously, the EAO model measures the entrepreneurial attitudes of individuals with a composite score based on measures from four attitude subscales. These subscales are used to measure the entrepreneurial attitudes across the following constructs: (1) achievement in business, as in creating a business, (2) innovation in business (by acting upon business incentives), (3) perceived personal control of business outcomes, and (4) perceived self-esteem in business (as an indication of self-evaluated confidence in business affairs). Robinson et al. (1991) found that these four subscales were able to predict entrepreneurial intention in 77 percent of cases.

The EAO has been extended by McCline, Bhat, and Baj (2000) in the context of the health care industry. In addition to the four subscales developed by Robinson et al., McCline et al. proposed subscales of two other constructs: (a) attitude toward risk and (b) an attitude of recognizing unmet needs in the health care environment.

**Hypotheses**

Several studies have supported the influence of demographic and other factors on entrepreneurial attitudes. Using the Robinson et al. EAO model (1991), Harris and Gibson (2008) showed that that previous exposure to a small business in one’s family was significantly related to achievement in business, innovation in business, and perceived personal control. Having owned one’s business was also significantly related to achievement in business and perceived personal control.

Other studies have supported that previous exposure to business is a significant factor in predicting entrepreneurial attitudes. A recent study (Frazier and Niehm 2008) based on social cognitive career theory (developed by Lent, Brown, and Hackett 1994) of family and consumer science students determined that self-efficacy beliefs related to self-employment were positively influenced by exposure to entrepreneurship through family, work, and educational experiences. In this study, self-efficacy was considered to be a measure of entrepreneurial intention.
Gender could also be a likely factor affecting entrepreneurial intention. Harris and Gibson (2008) also determined that there was a significant difference between male and female business students in their need for perceived personal control of business outcomes and their innovation in business, with males having higher scores on the entrepreneurial attitude scale than females. These results conflicted with a previous study (Wilson, Kickul, and Marlino 2007) which had also considered self-efficacy to be a better measure of entrepreneurial intention. Wilson et al. had showed that entrepreneurship education resulted in higher self-efficacy scores for women MBA students than for male MBA students. Based on their research, Wilson et al. concluded that women need the self-confidence and expectation of success in order to pursue entrepreneurial aspirations.

Entrepreneurial experience has also been suggested as a factor influencing entrepreneurial attitude, and educators have recognized this need in entrepreneurial education (Beckman 2007). McCline, Bhat, and Baj (2000) in their EAO-based study of self-employed (entrepreneurial) and employed (non-entrepreneurial) nurses found that the self-employed nurses had significantly higher perceived control and perceived self-esteem in business scores. This study supported two of the four constructs measured by the EAO model (Robinson et al., 1991) in assessing the entrepreneurial attitudes of entrepreneurs and non-entrepreneurs. The EAO model was also partially supported by van Wyk and Boschoff (2004) in their study of the entrepreneurial attitudes of accountants (entrepreneurs) and pharmacists (non-entrepreneurs). This study showed significant higher scores for the entrepreneurs relating to innovation and self-esteem.

Differences in entrepreneurial attitudes of business and non-business students have been studied (Shinnar, Pruett, and Toney 2009) using a survey instrument developed at the University of Alicante, Spain. The survey asked the students to rate their entrepreneurial disposition on a 7-point Likert scale. This study revealed that business majors were more likely to want to start their own businesses, although there was some interest in entrepreneurial careers among non-business majors.
This result suggested that there existed a significant opportunity to formally expand entrepreneurship-related education beyond the business school.

Based on these prior findings, the following hypotheses are offered for analysis:

H1. Business and accounting students will have stronger entrepreneurial attitudes than arts students.

H2. Male business and arts students will have stronger entrepreneurial attitudes than female arts and business students.

H3. Both business and arts students with exposure to business courses or entrepreneurship will have stronger entrepreneurial attitudes than students without any exposure to business or entrepreneurship.

In addition to these hypotheses, demographic factors based on the information collected from the participants are also suggested for analysis to determine any significant relationship between these factors and any of the four constructs measured by the EAO model.

Methodology

Research Approach and Participants

The quantitative approach has been successfully used in several previous studies. These studies include ones performed by Robinson, Huefner, and Hunt (1991), Robinson, Stimpson, Huefner, and Hunt (1991), McCline, Bhat, and Baj (2000), van Wyk and Boschoff (2004), Wilson, Kickul, and Marlino (2007), Harris, Gibson, and Taylor (2007), Harris and Gibson (2008), Frazier and Niehm (2008), Kerrick (2008), and Shinnar, Pruett, and Toney (2009). This study derives important precedents for its methodological procedures from these and other published studies. In addition, because the intent of this study was to generalize the results to the larger population of business, visual arts students, and performing arts students, a quantitative approach was deemed the best fit for the objectives of the study.
Little information, however, is known concerning the demographic characteristics of the U. S. population of business and arts undergraduate students. According to the Digest of Education Statistics (US Department of Education 2007) of the 1,485,242 bachelor’s degrees conferred by degree-granting institutions in the U.S. from 2005 to 2006, 318,042 (21 percent) were business degrees and 83,297 (6 percent) were visual and performing arts degrees. Approximately 50 percent of the undergraduate business students graduating in that time period were male, and 68 percent were Caucasian. In contrast, approximately 39 percent of the undergraduate performing and visual arts students graduating in that time period were male, and 77 percent were Caucasian.

The sample population in this study was similar to the general population in gender and race. Participants in this study were 146 undergraduate business students and 127 undergraduate arts students enrolled at a small mid-Atlantic liberal arts university between November, 2009 and February, 2010. Approximately 55 percent of the business students and 30 percent of the arts students were male. Like the general population, a large percentage of the participant population was Caucasian. Approximately 83 percent of the business students and 97 percent of the arts students were Caucasian. Accounting majors made up 10 percent of the business students, and performing arts majors made up 58 percent of the arts students. Demographic characteristics and other information concerning the sample population are summarized in Table 1.

Procedure

Faculty teaching undergraduate courses in business and arts were asked by the research team for their voluntary participation in this study. The stated purpose of the study was to investigate the entrepreneurial attitudes of business and arts students. The research team then visited the business and arts classes taught by the faculty participating in the study, and after explaining to the students the nature of the study, the research team asked the students to complete an anonymous survey during a break in the class. The research team stressed to the class that survey completion was entirely
voluntary, that no identifying information would be recorded, and that all individual information was confidential.

**TABLE 1**

**RESEARCH SAMPLE CHARACTERISTICS (AS PERCENT OF RESPONDENTS)**

<table>
<thead>
<tr>
<th></th>
<th>BUSINESS STUDENTS</th>
<th>ARTS STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>N</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>Undergraduate Major</td>
<td>146</td>
<td>9.6</td>
</tr>
<tr>
<td>Acctng.</td>
<td>9.6</td>
<td>Perform. Art</td>
</tr>
<tr>
<td>Bus.only</td>
<td>90.4</td>
<td>Visual Art</td>
</tr>
<tr>
<td>Gender</td>
<td>145</td>
<td>54.5</td>
</tr>
<tr>
<td>Male</td>
<td>54.5</td>
<td>Female</td>
</tr>
<tr>
<td>Female</td>
<td>45.5</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>145</td>
<td>51.0</td>
</tr>
<tr>
<td>Under 21 years</td>
<td>51.0</td>
<td>21 years and Older</td>
</tr>
<tr>
<td>21 years and Older</td>
<td>49.0</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>144</td>
<td>10.4</td>
</tr>
<tr>
<td>Married</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>143</td>
<td>82.5</td>
</tr>
<tr>
<td>Caucasian</td>
<td>82.5</td>
<td>Non-Caucasian</td>
</tr>
<tr>
<td>Non-Caucasian</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Years of College Education</td>
<td>146</td>
<td>37.7</td>
</tr>
<tr>
<td>Three years or More</td>
<td>37.7</td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td>146</td>
<td>20.7</td>
</tr>
<tr>
<td>$100,000 plus</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>145</td>
<td>4.1</td>
</tr>
<tr>
<td>Taken at Least One Business Course</td>
<td>86.2</td>
<td>34.7</td>
</tr>
<tr>
<td>Taken at Least One Entrepreneurial Course</td>
<td>34.5</td>
<td>13.7</td>
</tr>
<tr>
<td>Friends Have Their Own Business</td>
<td>54.5</td>
<td>46.8</td>
</tr>
<tr>
<td>Have Worked in a Small Business</td>
<td>63.4</td>
<td>50.0</td>
</tr>
<tr>
<td>Parents or Close Relatives Have Small Business</td>
<td>55.9</td>
<td>42.7</td>
</tr>
<tr>
<td>Have had a Small Business</td>
<td>4.8</td>
<td>8.1</td>
</tr>
<tr>
<td>Currently Have a Small Business</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Have Some Exposure to Business</td>
<td>97.9</td>
<td>79.8</td>
</tr>
</tbody>
</table>

**Measures**

Entrepreneurial attitudes were measured with the EAO survey instrument developed by Robinson et al. (1991) with the four subscales across the following constructs. These constructs are the
dependent variables used in this study: (1) achievement in business, as in creating a business (Cronbach’s alpha = .84), (2) innovation in business by acting upon business incentives (Cronbach’s alpha = .70), (3) perceived personal control of business outcomes (Cronbach’s alpha = .90), and (4) perceived self-esteem in business, as an indication of self-evaluated confidence in business affairs (Cronbach’s alpha = .73).

Participants responded to the 75-statement EAO survey, using a 10-point Likert type scale to items in terms of how much they agree with the statement, where a “1” indicated “strongly disagree” and a “10” indicated “strongly agree.” In addition, participants provided demographic information including undergraduate major, gender, age, marital status, ethnicity, highest level of education, household income, and yes-no responses to eight statements relating to exposure to business courses or entrepreneurial initiatives. Statements relating to exposure to entrepreneurial initiatives were as follows:

1. I have close friends who have or had their own business.
2. I have worked in a small business.
3. My parents or other close relatives have or had their own business.
4. I was self-employed or had my own business.
5. I am currently self-employed or have my own business.

**Data Analysis**

All hypotheses were tested using independent *t*-tests with determinations of significance based on a *p* < 0.05 standard. When applicable, one-way ANOVA was used followed by the Bonferroni procedure.

**Results**

There were 321 surveys collected, and the participants identified their major as either business (only), accounting, performing arts, or visual arts on 273 of them. In this study, *business students* were comprised of students majoring in business (only) and students majoring in accounting, while *arts*
students were comprised of students majoring in performing arts and students majoring in visual arts. This breakdown is detailed in Table 1. This sample, while not random, was diverse and could be considered representative of the general student population majoring in these areas.

Overall results indicated that both business and arts students possessed entrepreneurial attitudes, and that both student characteristics and entrepreneurial experience were found to be significantly related to certain entrepreneurial attitudes. In addition, several demographic and other factors that influence entrepreneurial attitudes were identified through the analysis of this data.

\( H1 \) proposed that business and accounting students would have stronger entrepreneurial attitudes than arts students. This hypothesis was supported by an independent \( t \)-test analysis showing that business students had a significantly higher mean score (\( M = 7.83 \)) for achievement in business versus a mean score of 7.51 for arts students, \( t(271) = -2.59, p < .05 \), and a higher mean score of 7.08 for personal control versus a mean score of 6.78 for arts students, \( t(271) = -2.63, p < .05 \). However, the one-way ANOVA of the relationship between the individual specializations in the undergraduate major and the four constructs revealed significant differences in the mean scores relating to innovation in business attitude, \( F(4, 313) = 2.36, p = .05 \), with performing arts students having the highest mean score of 6.75, followed by visual arts students (\( M = 6.75 \)), business students (\( M = 6.67 \)), and accounting majors (\( M = 6.28 \)).

Only two demographic factors, age and education, were also found to be significantly related to any of the four constructs after all the demographic information collected from the respondents was analyzed. Gender was not found to be a significant factor; thus, \( H2 \), which proposed that male business and arts students would have stronger entrepreneurial attitudes than female arts and business students, was not supported. The independent \( t \)-test analysis did show that for business students, age was significantly related to innovation in business. The mean score for business students 21 years and
older \((M = 6.82)\) for innovation in business was significantly higher than the mean score of 6.47 for business students under 21 years, \(t(143) = -2.85, p < .01\).

The one-way ANOVA of the education level of the students also indicated a significant relationship to the innovation in business attitude. For arts students, mean scores decreased from 7.27 for first-year college students to 5.94 for students with over three years of college education, \(F(4, 122) = 5.90, p < .001\). For business students, mean scores increased from 6.48 for first-year college students to 7.37 for students with over three years of college education, \(F(4, 141) = 3.92, p < .01\).

H3 proposed that business and arts students who had taken at least one business course or who had exposure to entrepreneurship would have stronger entrepreneurial attitudes than students without any entrepreneurial experience or business training. This hypothesis was supported by positive responses to a majority of the questions relating to entrepreneurial exposure or business education. The employment of business students in small businesses particularly enhanced their innovative attitude scores. The mean innovation in business score \((M = 6.74)\) for business students who had worked in a small business was significantly higher, \(t(143) = -2.34, p < .05\), than for business students who had never worked in a small business \((M = 6.44)\).

The entrepreneurial attitudes of arts students especially benefited from exposure to business courses or entrepreneurship. The mean perceived self-esteem in business score \((M = 7.20)\) for arts students who had parents or close relatives with their own businesses was significantly higher, \(t(122) = -2.58, p < .05\), than for arts students without this exposure to entrepreneurship \((M = 6.80)\). The arts students who, at the time of the study, were self-employed or had their own businesses scored significantly higher in three entrepreneurial constructs than arts students who were not entrepreneurs. Arts student entrepreneurs had a significantly higher, \(t(122) = -2.47, p < .05\), mean score of 8.43 in achievement in business than the arts student non-entrepreneurs \((M = 7.48)\). The mean perceived personal control of business outcomes score \((M = 7.72)\) for arts student entrepreneurs was also significantly higher, \(t(122) = -2.62, p < .05\), than for arts student non-entrepreneurs \((M = 6.74)\). In
addition, art student entrepreneurs scored significantly higher, $t(122) = -2.10, p < .05$, with a mean score of 7.34 in *innovative attitude*, than art student non-entrepreneurs ($M = 6.72$).

Arts students who had taken at least one business course also scored significantly higher, $t(122) = -2.27, p < .05$, in *innovative attitude*. The mean score for arts students related to this construct was 6.97, versus a mean score of 6.65 for arts students who had not taken any business courses. Arts students who had taken at least one business course also scored significantly higher, $t(122) = -2.00, p < .05$, in *personal control of business outcomes*, with a mean score of 7.04 versus a mean score of 6.67 for arts students who had not taken at least one business course.

**Discussion**

Although mean attitudinal scores for *achievement in business* and *perceived personal control* were significantly higher for business students, both performing and visual arts students scored higher than business students in *innovation in business*. In particular, arts students with their own businesses had high scores in *business achievement*, *perceived personal control of business outcomes*, and *innovation in business*. The *perceived self-esteem* of arts students was also higher if they had parents or close relatives who were entrepreneurs. Furthermore, arts students who had taken at least one business course had significantly higher mean scores for *innovation in business* and *perceived personal control of business outcomes* than arts students who had not taken any business courses.

Analysis of the demographic factors showed that older business students with more education and arts students with less college education, for example, freshman arts students, tended to score high in *innovative attitude*. It could be that the creativity of business students is enhanced with more education and experience, whereas the creativity of arts students must be nurtured at a younger age or their creativity may be inhibited.

**Practical Implications**
In order for colleges and universities to attract and retain arts and business students and to develop business and entrepreneurship programs tailored to their needs and interests, it is important to understand what the predictors of entrepreneurial attitudes are for the arts and business segments of the student population. For any educational institution or small business initiative pursuing students interested in business, visual arts, or performing arts careers, these findings are important because the results of this study can be used to successfully design, implement, and market entrepreneurship programs and business curricula.

For example, this study reveals that the entrepreneurial attitudes of arts students could be enhanced by their taking at least one business course. Thus, it may be important for arts students to take a business course in their freshman year because the younger students could respond to new ideas at a younger age before they acquire any pre-conceived notions about business. In addition, for institutions pursuing arts students, a target market segment could be arts students with parents or close relatives who have their own businesses, because these people could serve as role models and sources of support for budding entrepreneurs in the visual arts- or performing arts-related businesses. The findings in this study confirm Beckman’s recommendations (2007) for the administration of entrepreneurship programs: (a) by emphasizing experiential education as a way to create an opportunity for students to use a taught skill set, such as basic business literacy, and to apply entrepreneurial techniques in a controlled environment and (b) by focusing on the intangible and less explored aspects of the typical entrepreneurial curriculum which involve innovation development and entrepreneurial behavior.

The attitudes of business students also could possibly benefit from their working in a small business setting, because they are already taking business courses. Older business students who are interested in entrepreneurship may benefit from more business education, particularly at the
graduate level. Graduate courses in business should thus offer some type of exposure to entrepreneurship and/or an entrepreneurship specialization.

This information on the entrepreneurial attitudes of the business student and arts student populations may also be of interest to other audiences for a variety of reasons. These audiences include the Small Business Administration, the U.S. Small Business Development Centers, small business institutes or initiatives, and the developers and managers of arts entrepreneurship programs.

References


Impact of Knowledge Resource as a Moderator of EO-Performance Relationship: Evidence from Japan

Yoshihiro Eshima

Abstract
By using 124 Japanese samples of small firms, this study investigated for the influence of the entrepreneurial strategic orientation (EO) to the performance as well as the moderating effect of the knowledge resource to their relationship. As most EO literature suggests, the result indicated that the EO was a strong predictor of a firm’s performance. Furthermore, when being moderated by the highly intensified knowledge resource, EO showed an even stronger performance. The theoretical and practical implications were discussed.

Introduction
Entrepreneurial strategic orientation (EO) has been highlighted in the strategic making literature over twenty years. It has been conceptualized as a firm level strategic engine through which entrepreneurial actions are encouraged for exploring and exploiting new opportunities. The choice of EO provides a firm with a strong management lens to monitor and evaluate opportunities and substantially leads a firm to achieve higher corporate performance. Most of empirical evidences support the positive effect of EO to a firm’s performance (Rauch, Wiklund, Lumpkin and Frese, 2009).

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EO is a forward-looking, aggressive and innovative with risk-taking posture. Originated mainly from the study of Miller (1983) and Covin and Slevin (1989), EO researches frequently use their conceptual dimensions of EO construct: Proactiveness, innovativeness and risk-taking propensity. The conceptual domain of EO construct in the literature seems to be consistent. However, the process between such strategic posture or orientation and a firm performance are neither well understood nor clarified. Missing link between EO and a higher corporate performance still exists.

EO is regarded as a strategic engine. However, engine needs a fuel. In particular, appropriate fuel to fit EO engine to boost strong but efficient corporate performance are desired. By using resource-based view and knowledge-based perspective, investigations of contingent or moderating factors of EO-performance relationship were explored (Wiklund and Shepherd, 2003a, 2003b, 2005; Lee, Lee and Pennings, 2001). However, few empirical evidences are accumulated to conceptualize their appropriate relationship. Furthermore, their managerial implications are neither straightforward nor practical for small entrepreneurial business owners and policy makers to apply. Accordingly, exploring for contingent or moderating factors of EO-performance relationship has been continued. Questions still remains in the EO literature where and how the critical fuel can be acquired and developed in order to facilitate EO with a high corporate
To contribute to answering this question, this study explores the knowledge resource to improve EO-performance relationship by utilizing the emerging perspective of the guided preparation as an outsider knowledge resource (Chrisman and McMullan, 2000, 2004; Chrisman, McMullan and Hall, 2005) and empirically test the validity of this view. The guided preparation is conceptually defined as a business counseling activity which provides entrepreneurs or small business owners with value-added explicit and tacit knowledge. Counseling is provided through learning by doing approach and experimentally-based practice. Therefore, the guided knowledge is seen as a context-oriented and socially-complex and thus relatively difficult to duplicate and substitute by competitors (Barney, 1991). This intangible knowledge is subjected to produce a basis of sustainable competitive advantage and substantially enhance a corporate performance. Empirical evidences support this view (Chrisman and McMullan, 2000, 2004; Chrisman, McMullan and Hall, 2005). However, they use only one knowledge resource in the US Small Business Development Centers (SBDC). This study uses a conceptually similar but differently located knowledge resource, namely Small Business Support Centers in Japan (SBSC), to explore the effect of the guided preparation as a knowledge resource and test the validity of this view.
This study contributes to three areas of EO literature. First, new empirical evidence is found and added to the literature from Japan about the EO-performance relationship. To my knowledge, no Japanese empirical studies of EO were ever reported and published outside of Japan. The result may contribute to generalizing the conceptual domain of EO globally. Second, this study shows a new evidence of a moderating factor of EO-performance relationship which is one of the unclear and inconsistent areas of entrepreneurship study. It contributes to supporting a contingent approach of EO study. Third, this study tests the validity of the perspective of the guided preparation by using a different knowledge resource. The empirical result may further develop a wide range of applicability of this new perspective in entrepreneurship study.

In the following sections, literature reviews and hypotheses are discussed and developed. Following these, the unique data-set of SBSC and research methodology are explained. Then, empirical results and discussions including practical implications follow. Finally, limitations and future research are discussed.

**Literature Review and Hypotheses**

**Conceptualizations and Dimensions of EO**
Over the past twenty years, the conceptualizations and dimensions of EO have been frequently discussed and developed in the strategic making literature. Covin & Slevin (1991) conceptualized EO as an organizational strategic initiative which is based upon the realized patterns of entrepreneurial activity from the past strategic decision. McGrath and MacMillan (2000) conceive the EO as a frame of mindset or entrepreneurial thinking. Reviewing the literature, EO has been seen as a critical strategic posture or guidance in the strategic decision making process. It can help to monitor, discover and exploit new opportunities and lead a firm to a high corporate performance. From such entrepreneurial forward-looking behavior, firms are likely to acquire future wants and needs of the emerging market faster than competitors.

One of the dominant and classical dimensions of EO is originated from the study of Miller (1983) and it has been frequently referred in the EO literature. It consists of proactiveness, innovativeness and risk-taking propensity and they have to be exhibited simultaneously. Lumpkin and Dess (1996) added two more dimensions of EO: Competitive aggressiveness and a capacity for autonomous action. They argued that EO should be viewed as a multidimensional construct: All element of EO does not necessarily and simultaneously have to be high to capture entrepreneurial phenomenon.

Although there are some criticisms for the EO concepts and construct instruments
(Wiklund 1999; Churchill 1992; Shane and Venkataraman 2000), EO researchers are appeared to attempt to capture the mechanism of entrepreneurial process or behavior based upon their own analytical perspective by using a wide rage of conceptual domain of EO. Recognizing commonly used conceptualized domain of EO over the past twenty years (Zahra, Jennings and Kuratko, 1999; Rauch, Wiklund, Lumpkin and Frese, 2009), I conceptualize the EO as a firm level and a critical strategic engine through which entrepreneurial initiatives or actions are encouraged for discovering and exploiting new opportunities. In terms of the dimensions of EO, I followed the study of Miller (1983) and Covin & Selvin (1989, 1991) since this study views EO as a collective organizational engine to guide for a high corporate performance.

Accordingly, the following three dimensions of EO construct were used in this study: Proactiveness, innovativeness and risk-taking propensity. The proactive orientation is a very fast and aggressive market strategy or product development process. Typically, firms initiate actions before competitors move into the new market so that they dominate the new business opportunities. Proactiveness is seen as a strategic posture of exploring future wants and needs in the market. The second innovative action refers to the firm’s tendency toward experimentation of new ideas, creative processes and technological leadership which may produce new lines of unique products and services
in an emerging market. Firms with innovative mode tend not to stay in established
technologies, business model and practice. The risk-taking propensity involves a large
resource investment toward uncertain high-risk and high-return projects or businesses
which cost of failure may be high.

EO-Performance Relationship

EO is regarded as a strategic engine or lens to monitor how management may focus
on and discover new frontiers. From this strategic lens, firms benefit with a quick
penetration to new and niche market and selling their services better (Zahra & Covin,
1993). The firms with innovative, pro-active and risk-taking strategic initiative are
likely to move them forward in the technological or market frontiers and keep
competitors behind, which may lead firms to capture new opportunities and create
additional market values. Such aggressive and forward-looking strategic orientation
facilitates a firm to achieve higher performance.

EO literature consistently suggests that firms are likely to perform better when they
behave entrepreneurial (Covin & Slevin, 1989, 1991; Lumpkin & Dess, 1996; Key et al.,
2007; Zahra, 1991; Zahara & Covin, 1995; Wiklund, 1999; Madsen, 2007). However,
these empirical studies are mostly conducted in western context. Although empirical
evidences from non western context such as China or Korea (Tang, Tang, Marino, Zhang & Li, 2008; Lee, Lee and Pennings, 2001; Li et al., 2008) are increasing, they are still few. To my knowledge, no empirical studies of EO are reported from Japan.

Yet, reviewing and evaluating 51 EO studies across the country, Rauch, Wiklund, Lumpkin and Frese (2009) concluded that the correlation of EO with performance is moderately large. In line with their findings and many other empirical results in EO literature, I address the following general hypothesis.

**H1: EO is positively associated with a firm’s performance.**

Although firms receive greatest benefits from the entrepreneurial strategic initiative, there are missing links between EO and the performance. It is argued that there are some contingent factors to influence EO-performance relationship (Covin and Slevin, 1991; Lumpkin and Dess, 1996). Scholars point out that EO is a resource-consuming strategic initiative (Covin and Slevin, 1991; Romanellie, 1987) and EO-performance relationship may change better or worse depending upon the resource availability and utilization. The knowledge is a part of the firm resource. In particular, the knowledge related to discovery and exploitation of new opportunity can be a critical resource for
firms to achieve entrepreneurial outcomes.

Supporting this view, Wiklund and Shepherd (2003b) emphasized the necessity of knowledge development about the discovery and exploitation of opportunity to advance their performance. Since EO is a strategic aspect for decision making styles or methods or practices in nature (Lumpkin and Dess, 1996), it will not be directly related to the entrepreneurial action without the practical knowledge input. Specifically, the knowledge of how well and where to explore the niche or emerging market, interpretative capability of and the ability to utilize the new opportunity should be coincided with the aggressive and forward looking aspect to pursue entrepreneurship. Empirical evidence supports this effective role of knowledge in association with entrepreneurial initiative and performance (Wiklund and Shepherd, 2003b).

Entrepreneurial oriented firms are mostly growth-oriented since they seek aggressively for new opportunity. As such, they are willing to absorb and acquire any information and knowledge related to their business endeavors. They are quite enthusiastic for learning something new and something different to achieve their goals. Such strategic leaning posture or capability may be one of the features of the entrepreneurial oriented firms. Therefore, in order to acquire and develop managerial knowledge and then to grow faster, entrepreneurial oriented firms have advantages since
they are a good strategic learner. Such learning capability makes it possible that they actively search for the needed knowledge and attempt to understand it precisely and utilize it properly. It seems that EO is a strong magnet to combine the efficient but powerful knowledge fuel with a high performance. Accordingly, through the provision of the value-added knowledge, EO capability as a strategic engine may increase and then enhance a firm’s performance even faster.

In this respect, the emerging perspective of the guided preparation as the critical knowledge resource helps to improve the EO-performance relationship.

**Perspective of the Guided Preparation as a Knowledge Resource**

Developing the resource-based view and knowledge perspective, Chrisman and McMullan (2000, 2004) and Chrisman, McMullan and Hall (2005) conceptualized a role of guided preparation as a critical knowledge resource for entrepreneurs to be innovative, survive and grow. Through their extensive long term research of Small Business Development Centers\(^1\) (SBDC) in the US, they induced important value of outsider assistance which develop entrepreneurial knowledge and realize entrepreneurial

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\(^1\) Information about SBDC in this study is mostly from the referred literature. However, it was confirmed and added by author’s interview research to the State Director of Pennsylvania Small Business Development Centers and the Director of Wharton Small Business Development Center. Both studies were conducted in August, 2003.
outcomes. It is suggested that business counseling, which is implied as a hands-on type of business mentoring activity, plays a key role of filing in the knowledge gap of nascent entrepreneurs or small business owners to achieve their goals. It is assumed that start-ups or small businesses who have the growth aspiration or desire have a gap between the knowledge possessed by them and the knowledge required for their growth.

More importantly, explicit and tacit knowledge from the guided preparation is posited as a critical role of facilitating entrepreneurial behavior and performance of small firms. The knowledge provided from business counselors is not only explicit knowledge such as business facts or theories but also tacit knowledge such as knowing-how or knowing-who. It is pointed out that knowing-how is associated with the business development process of learning by doing and knowing-who is involved in development of business network (Malecki, 1997). Although both explicit and tacit knowledge are needed for business launching or business extending process, the business counseling tends to focus more on developing the tacit knowledge. It is because such knowledge can make the firm to place on the highly competitive position. It can be quite difficult to duplicate and substitute by competitors since it is a context-oriented and socially-complex (Barney, 1991). Such intangible organizational knowledge can be seen as a source of sustainable competitive advantage (Hitt, Ireland
and Hoskisson, 1999; Wiklund and Shepherd, 2003b).

The way to conduct the SBDC counseling service is unique. Collaborative work between entrepreneurs or small business owners and professional business counselors is central. Counselors do not provide a direct assistance like a business consultant. Rather, they take a responsibility of guiding business owners for structuring and developing business plan, marketing plan or financial plan. Actual works and actions are taken by business owners under the thorough guidance of business counselors. Such a well structured guidance and intensified interactions develop the intangible asset necessary for improving and enhancing new or existence business.

The empirical evidence of the high survival and growth performance ratio of the nascent entrepreneurs or small business owners (Chrisman and McMullan, 2000, 2004; Chrisman, McMullan and Hall, 2005) explains the critical role of the managerial guidance or counseling activity from SBDC. The experimentally-based and learning by doing practice is the nature of the assistance. It builds the important managerial knowledge or ability (mixture of explicit and tacit knowledge) required for and fit to entrepreneurial oriented firms to explore and exploit new opportunity. Such a highly intensified business counseling was a key for success. In line with this perspective and its supporting empirical evidences, I address the following hypothesis.

Overview of SBSC\(^2\) as a Knowledge Resource

Small Business Support Centers (SBSC) in Japan provides small business owners or entrepreneurs with conceptually and practically similar business counseling services to SBDC in the US. The SBSCs are mainly supported or subsidized by regional governments since their inceptions. They were established in 2000 and have sixty regional centers throughout Japan. It is aimed at helping growth-oriented SMEs to start or extend their own businesses with success. Centers provide for professional managerial services to solve their critical managerial issues to achieve their goals. The assistance mainly covers the on-site professional management advice/counseling services, feasibility evaluation and advice of business plan, and the provision of a wide range of business information. The number of users of on-site professional services was

\(^2\) To understand the scheme and service of SBSCs, author conducted interview research frequently to the project manager of regional SBSC in Osaka between 2000 and 2005, and collected material information as well. Furthermore, author attended counseling sessions and workshops of two small business clients to fully understand specific implementation process of their services in spring and fall of 2007.
10,205 in 2000 and 21,789 in 2005. About the service users of feasibility evaluation and advice of business plan, each number was 126 in 2000 and 241 in 2005.

Services are provided as a request base by small business owners. Some assistance continues for a year or even longer as a series of project. On the other hands, specific advice or information finishes by one shot and no continuation. The way to provide business advice has some similarity with business mentoring or hands on type of business counseling activity especially when the service continues as a project base. This long-term based business counseling activity, in general, starts with the thorough discussions of management issues by business professionals and business owners. Following the clarification and specification of the problems, both are subjected to agree the scope of the managerial issues and the approach to solve. Then, the counseling project launches. When it starts, most of the actions and works are done by small firm clients except for some technical or professional research. The essential role of business counselors is to develop management capability of the client to solve their own management problems. For example, business counselors help to identify and evaluate internal resources, and determine which resources to invest or utilize. Their services focus not only on the direct problem-solving but also the guiding to the development of managerial capability from the learning by doing approach. It resembles with the
relationship of a teacher and student to achieve their educational goals.

Through the counseling process, the emphasis goes on building contextually and socially embedded managerial knowledge. Accordingly, business professionals frequently assign clients (SMEs) for a particular work to guide them from one phase to another. For example, when SWOT analysis was assigned to the client during the counseling period, the expertise professional opened in-house workshop for CEOs and managers including middle managers to explain the objectives and contents of the work. After a couple of weeks, their assignments are presented, discussed and commented. Occasionally, they are required to start over. But, mostly they go to the next phase under the thorough guidance of business professionals. Likewise, the counseling project continues step by step.

Business counseling from SBSCs assists small firms by providing the knowledge which is more associated with the market opportunity and its utilization. They focus more on monitoring internal and external resources, and guide small businesses to pay more attention to the marketing and strategic issues.

Business professionals in SBSCs are well qualified. Acknowledging general management principles and specific small business issues throughout the extensive business advising experiences (including business management or owner experiences),
they have additional areas of business expertise such as marketing, human resources, strategy, networking, operations management, information system, accounting or financing.

When the counseling is implemented, generally the project team from both sides (SBSCs and small business firms) is organized. The team is initiated by the project manager from SBSC and business owners or CEOs. Then, the project is implemented by the business counselor from SBSCs and staff including managers from client firms. They work together and commit to achieve their goals. Successful provisions of the services from SBSCs heavily depend on their aspirations, commitment and collaborative works.

SBSCs provide small firms with opportunity to improve their performance. Regarding the program assistance, McMullan et al. (2002) showed five areas of conditions of effective business assistance: (1) the process of the informed choice of the assistance, (2) availability of the qualified advisors or counselors, (3) just-in-time delivery of the appropriate fresh managerial knowledge, (4) client involvement into the counseling process to gain applied knowledge and (5) an attention of the strategic or managerial aspect. As explained above, these elements are contained in the SBSC service. Likewise, the SBSC business counseling provides small firms with knowledge.
development process or opportunity and substantially fills in the gap between the knowledge possessed by them and the knowledge required for their growth.

**Research Methodology**

**Data Collection**

To test hypotheses described above, service recipient firms from SBSCs were used. To collect their managerial data, the following procedure was taken. First, their mail addresses were searched in order to send a mail questionnaire to all service recipient firms. As a result, “the best practice list of SBSCs’ clients” was found in the web-site which is run by the small business agency. Firms in the list were chosen by each regional SBSCs. There were no clear-cut selection criteria for the list. However, it was assumed that the structure and the quality of the service provision to the listed firms was close to the scope or picture which SBSCs were willing to attain. Firms in the list were considered benefited or satisfied from the service provision. As such, I chose these firms

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3 I requested to SBSCs for acquiring their addresses but they were not allowed to provide. It is because the service recipient information, although it is a mail address and for academic use, seem to be purely confidential.

4 Please check the following web site for more information (in Japanese).

5 Through the author's research interviews to the project manager of regional SBSC in Osaka between 2000 and 2005, the described meaning of the best practice list was confirmed.
for the following analysis; Its number was 879. Then, the mail questionnaire was sent to these firms in December 2007. During three months period, a total of 187 responses were received. The total response ratio was 21.3%. To make the precise data set for the business counseling users from SBSCs, the responded questionnaires were carefully reviewed and non-users of this service were eliminated. They were the client of the SBSCs but did not receive the business counseling assistance; Business information or over-the-counter consultation services may be provided for them. Accordingly, 124 usable data were chosen. I checked sample representative bias by their size (capital) and industry. The result indicated that the responses to the questionnaire were representing the original sample of the study.

The demography of the sample is as follows. About the industry, the most dominant industry was manufacturing (54%) followed by the service (10%) and the construction (10%). Average size of capital and sales turnover were about 28,603,000 yen (equivalent to 286,030 US dollars) and 444,722,000 yen (equivalent to 4,447,220 US dollars), respectively\(^6\). The average number of employees is about 24. The average year of the firm establishment was 1980 and the average age of the firm was about 27.

\(^6\) Calculated as one dollar is equal to one hundred of yen.
Measurements

In this study, a firm’s performance was used as a dependent variable, and EO and the knowledge resource (or the business counseling service) from SBSCs were used as an independent variable and a moderating variable, respectively. Firm age, size and a scope of market are used as control variables.

Performance. Adapting the view that the performance is multidimensional in nature (Cameron, 1978), this study integrates different dimensions of the small business performance and measures performance with competitors in the same industry (Birley and Westhead, 1990).

Four performance indicators are used in this study: Innovation, sales, market share and profitability. Each indicator was measured by respondents’ perceived measurements. The innovation was measured by average sales of new products/services divided by total sales for the last three years compared with competitors in their industries by using a 7-point likert-scale (1=very low, 3=industry average, 7=very high). Similarly, sales turnover was measured by average sales growth rate for the last three years compared with competitors in their industries by using a 7-point likert-scale (1=very low, 3=industry average, 7=very high). Market share was measure by average increase of
market share for the last three years compared with competitors in their industries by using a 7-point likert-scale (1=very low, 3=industry average, 7=very high). Profitability was measured by average operational profit divided by total sales for the last three years compared with competitors in their industries by using a 7-point likert-scale (1=very low, 3=industry average, 7=very high). These measures were standardized and then combined into single performance measure. The cronvach’s alpha is 0.870.

EO. Adopting the study of Covin and Slevin (1989), I measured EO by three main components: Innovation, proactive orientation and risk-taking propensity. Of each component, three specific questions from the survey of Covin and Slevin (1989) were used by a 7-point Likert scale. A scale assesses firms’ strategic reliance on the following question items. Respondents were asked in innovation items: (1) Top managers favor “a strong emphasis on marketing of tried and true products or services”=1 versus “a strong emphasis on R&D, technological leadership and innovation”=7 (4=neutral); (2) For the past 5 years, a firm has marketed “no new lines of products”=1 versus “many new lines of products”=7 (4=neutral); (3) For the past 5 years, “changes in product lines have been of a minor nature”=1 versus “changes in product lines have been dramatic”=7 (4=neutral). In proactive orientation items, respondents were asked: In dealing with its
competitors, my firm (1) “responds to actions which competitors initiate”=1 versus “initiates actions which competitors respond to”=7 (4=neutral); (2) “is seldom the first business to introduce new products, etc.”=1 versus “is the first business to introduce new products, etc.”=7 (4=neutral); (3) “seeks to avoid competitive clashes”=1 versus “adopts a very competitive posture”=7 (4=neutral). In risk-taking propensity items, respondents were asked: (1) Top managers have “a strong proclivity for low-risk projects”=1 versus “a strong proclivity for high-risk projects”=7 (4=neutral); (2) Top managers believe “it is best to explore the environment gradually via timid behavior”=1 versus “wide-ranging acts are necessary to achieve the firm’s objectives”=7 (4=neutral); (3) When confronted with decision-making situations involving uncertainty my firm “adopts a cautious, ‘wait-and-see’ posture to minimize the probability of making costly decisions”=1 versus “adopts a bold, aggressive posture to maximize the probability of exploiting potential opportunities”=7 (4=neutral). To capture the EO variable, measures were standardized and combined. The Cronbach’s alpha was 0.787.

The knowledge resource. As described already, the business counseling service from SBSCs involved in learning by doing practice. The service provides clients with value added managerial and practical knowledge through which firms are guided to align their
entrepreneurial aspirations with a higher corporate performance. To measure the intensity of such knowledge input (high intensity or low intensity of knowledge provision), two dimensions were used: (1) The series of structured business counseling activity and (2) the interactive process with thorough discussions. Series of business counseling with a long interactive process is hypothesized to enhance management capabilities and thus performance. One shot or unscheduled (unstructured) counseling without much interaction is considered less effective for developing management capabilities. To construct the knowledge resource variable, two questionnaire items were used from the survey. Respondents were asked: (1) Business counseling was provided as “a single base upon the request” =1 versus “a long term series or a project base”=2; (2) the guidance was provided by thorough discussions and interactions within the organization (no=1, yes=2). Each answer was coded 1 and 2 as low and high intensity of knowledge input. Then, they were standardized and summed to construct the knowledge resource variable. The Cronbach’s alpha was 0.422.

Control variables. Besides the main (EO) and the moderating variables (knowledge resource), characteristics of firms and targeting size of the market are stated as important variables to influence for a firm’s performance (Storey 1994; Lumpkin and
Dess 1996; Chrisman, McMullan, and Hall 2005). In this study, four control variables were used: The firm age, size, industry and a market scope. The firm age was indexed by calculating the number of years after a firm’s establishment. The firm size was measured by taking a logarithm of the capital of firms. Industry and the scope of market were measured by dummy variables: Industry (1=manufacturing, 0=non-manufacturing) and the scope of market (1=nationwide or global, 0=non-nationwide nor global).

The descriptive statistics and correlation matrix of dependent, independent, moderate and control variables are presented in table 1. No serious multicollinearity in this sample was found; Their correlations are all under 0.5 (Hair, Anderson, Tatham, & Black, 1998).

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<th>Insert Table 1 around here</th>
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**Empirical Results**

To test hypotheses, the hierarchical regression analysis was used. It is expected to identify the main effect of EO as an independent variable and the knowledge resource as a moderating variable of EO to a firm’s performance.

Table 2 shows the result of the analysis. In model one (base model), all control
variables were entered into the regression model. As a result, only the size of capital was found as a positive and statistically significant relationship with the performance ($p<.05$). Besides, there were no statistically significant variables to explain variance of the performance dependent variable. In model two, the EO as an independent and main variable was added to the regression equation. It was found that the positive and significant relationship of EO with the performance was shown ($p<.05$). The positive sign of coefficients indicates that the performance was higher for firms with higher entrepreneurial strategic orientation. About the control variables, the size of capital is still significant but its relationship with performance is weak ($p<.10$). Adjusted $R^2$ (=.099) improved from the model one. Change in $R^2$ was statistically significant ($p<.05$).

It explains that this independent effect model (model two) contributes significantly above and over the model one (base model). By controlling firms’ characteristics, industries, the market scope, EO appeared as a positive and strong predictor of the firm performance. As previous EO literature indicates, the result confirmed that entrepreneurial strategic posture or initiative was effective for a corporate performance. Thus, hypothesis 1 was confirmed.

In model three, the knowledge resource as a moderating variable was entered into the regression analysis. The result showed no statistically significant relationship between
the knowledge resource and the performance. On the other hand, EO still showed the positive and significant relationship with performance \((p<.05)\). All control variables showed no significant relationship with performance. This model indicated that unlike the EO variable the knowledge resource variable independently did not explain for the performance dependent variable.

In model four, the interaction term between EO and the knowledge resource was allowed to enter into the regression equation. It showed a significantly positive relationship with performance \((p<.05)\). No control variables showed significant relationship with performance. The Adjusted \(R^2 (.205)\) in model four is the highest among other models. Change in \(R^2\) was also significant \((p<.05)\). Compared with the result of model two, three and four, it is suggested that the interaction term is present and is moderating the EO-performance relationship.

To capture the nature of the interaction term, two plots of the effect of EO (x-axis) on performance (y-axis) for values of outside knowledge resource (high and low level of intensity of the moderating term) were shown in figure 1. The value of high and low of
knowledge resource was set at plus and minus one standard deviation from the mean (Cohen and Cohen, 1983). Accordingly, these plots indicated that the higher performance with low level of EO could be achieved under the provision of low intensity of knowledge input. However, when the level of EO changed to be higher, the superior performance was attained under the condition of the high intensity of the knowledge provision. Firms with a high level of EO could not perform better or rather perform worse when the low intensity of knowledge was provided. As such, the result showed that a high intensity of knowledge input extensively improved the EO-performance relationship. Thus, hypothesis 2 was supported.

Discussions and Implications

Over the twenty years EO studies were conducted and developed mostly in western context. Few were observed from Asia. Symbolizing this, the comprehensive meta-analysis of EO studies selected and used the conceptual and empirical analysis of EO mostly from western nations such as the US or Europe (Rauch, Wiklund, Lumpkin and Frese, 2009). To my knowledge, no empirical studies of EO were reported from
Japan. This study contributed to filling in this research gap.

Four important findings or contributions were withdrawn from this study. First, this study confirmed that the entrepreneurial strategic orientation played an important role of enhancing the performance of small firms. The result was consistent to the previously developed EO studies and supported the view that firms with proactive, innovative and risk-taking propensity are likely to achieve entrepreneurial outcomes. As I adopted the conceptual domain of EO and its construct from the most dominant EO literature (Miller, 1983; Covin and Slevin, 1989), the finding from this study can be globally comparable. As such, the result of this study may contribute to generalizing the conceptual domain of EO globally.

Second, this study showed a new evidence of a moderating factor of EO-performance relationship which is one of the unclear areas of entrepreneurship study. The result indicated that the knowledge became the key factor which fit EO engine to boost the strong performance. The higher performance was achieved under the condition of a high intensity of the knowledge input when a firm’s level of EO changed higher. Two reasons can be considered for this finding. First, it is because the provided knowledge could be a valuable, rare and inimitable resource and fit to the needed knowledge for small firms to explore and exploit new opportunity. Stated differently, the value added knowledge
became a firm’s distinctive resource. As the study of Wiklund and Shepherd (2003b) implied, the knowledge played a key role of enhancing the EO to pursue entrepreneurial outcomes. As the resource based view suggests, firms with such knowledge resource are likely to achieve sustainable competitive advantage and substantially earns above normal returns (Barney, 1991). Second, it is because that the entrepreneurial oriented small firms are good strategic learners in nature. They are so eager, competitive and aggressive to acquire and understand new knowledge and to apply for their own business and experiment for new ideas or products. Such a forward-looking strategic posture is likely to fit to the intensified knowledge input and substantially to optimize the organizational performance.

Third, this study clarified or identified another knowledge resource in Japan, namely the SBSCs. They have many similarities to the SBDCs in the US. The business counseling service from SBSC emphasized on the knowledge development process through which the market opportunity and its utilization were highlighted. At the same time, the counseling process had unique characteristics and contained key elements of developing the organizational knowledge. The study suggested that the successful business counseling was not a one shot advice nor a short term guidance but a well structured series of service provision. Furthermore, the face-to-face interactions with
thorough guidance and the client involvement into the business counseling process were added. The value-added knowledge here was more or less a context-oriented and socially-complex and thus relatively difficult to duplicate and substitute by competitors. The nature of SBSC service was based upon the learning by doing approach and the highly interacted long-term based professional guidance. It was concluded that this highly intensified knowledge provision was the key for small firms to attain entrepreneurial outcomes.

Fourth, relating to the third finding, this study tested and confirmed the validity of the emerging perspective of the guided preparation by using a different knowledge resource. Through the extensive long term research of SBDC, Chrisman and McMullan (2000, 2004) and Chrisman, McMullan and Hall (2005) conceptualized a role of guided preparation as a critical knowledge resource for entrepreneurs to be innovative, survive and grow. Many empirical evidences supported their views. However, it has been tested by using one knowledge resource (SBDC). By setting the conceptually similar but differently located knowledge resource (SBSCs), this study investigated for the effectiveness of the provision of the another knowledge resource. As discussed already, the result confirmed the impact of the guided preparation (the business counseling service) from the new knowledge resource. The provision of the service developed
entrepreneurial knowledge and realized entrepreneurial outcomes. Likewise, the empirical result further developed a wide range of applicability of this new perspective in entrepreneurship study.

This study has some practical implications for both top managers of small firms and policy makers or public administrators to support small business. First, the result showed clearly that entrepreneurial strategic initiative was a strong engine for the firm’s high performance. Thus, such an orientation should be encouraged to be introduced into their firms. Top managers have to lead the firm to be innovative and proactive in the marketplace with the calculated risk-taking posture. Similarly, it can be worth considering that the public policy for supporting small business should focus more on the entrepreneurial strategic aspect of small firms rather than assisting for their financial assets such as the public loans to grow.

Second, this study suggested that the outsider knowledge was quite helpful for developing management capability to explore and exploit opportunity. In order for the entrepreneurial oriented small firms to enhance their corporate performance, the adoption of the intensified knowledge input became an important management choice. In this study, the government assistance program (the SBSCs’s service) played such a role. Accordingly, it is advisable for top managers of small firms to search for such
knowledge opportunity close by and use it properly. By the same token, policy makers should shed more light on this value of the intensified knowledge resource and spread this opportunity throughout the regions. By doing so, the growth oriented small firms will be able to reach out and benefit it for their growth and substantially will contribute to the regional economic development.

**Limitations and Future Research**

I conclude this paper with a discussion of the several limitations of the study as well as suggestions for future studies. First, although this study tested and validated the perspective of the guided preparation or the counseling services by using the new knowledge resource, more conceptual and empirical evidences across the regions and country are needed to develop and generalize this view. Researchers are encouraged to explore and investigate for other would-be-knowledge resources such as Business Links\(^7\) in UK by comparing with the SBDC in the US or SBSCs in Japan. Through such an endeavor, the effective small business assistance program may be developed and encouraged to launch and spread all over the country. Future research should

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\(^7\) Business Links in UK provide for similar business advising services to SBDCs or SBSCs. It originally started its service provision in 1992. Many investigative and evaluation studies were reported (Eunst & Young, 1996, 1997; Public and Corporate Economic Consultants, 1998; Roper, S., Hart, M., Bramely, G., Dale, L and Anderson, C., 2001; Mole, Hart, Roper and Saal, 2008).
Second, although, this study contributed to the entrepreneurship literature by providing new evidence from Japan, the finding should be carefully interpreted since the study used the cross-sectional data. Accordingly, the long-term effect of EO to the performance and the moderating effect of the knowledge resource were not empirically clear. To confirm their long-term and causal relationship, a longitudinal data analysis is necessary for future study.

In principle, this is a preliminary and explorative study of the relationship of EO, knowledge resource and the performance of small firms in Japan. It was the very first research attempt from Japan. In spite of the research limitation, the value of this study is still high. As discussed already, the finding from this study contributed to the EO literature to a great extent by generalizing the conceptual domain of EO globally and by highlighting the critical role of knowledge resource.
References


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*Entrepreneurship Theory and Practice*, 33 (January), 219-239.


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<th>3</th>
<th>4</th>
<th>5</th>
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*p<0.05

**p<0.01

***p<0.001

^p<0.10
Table 2
Regression result: Performance

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* $p<0.05$
** $p<0.01$
*** $p<0.001$
† $p<0.10$
Figure 1
EO × Knowledge

High Intensity of Knowledge

Low Intensity of Knowledge
The Effect of Triggering Events on Entrepreneur’s Decision Styles in Buying Small Business

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Abstract
An entrepreneur can start the business by buying an existing business rather than starting a new one from scratch. Past studies have argued that there are always benefits and costs in buying an existing business and the main issue would therefore be “how to choose the right business and make the right decision to buy”. In other words, we believe the decision process does matter in this particular buying situation. In brief, the aim of the paper is an attempt to examine the behavior of an entrepreneur’s decision to buy an existing small business. The following questions would be addressed. Why do entrepreneurs display different decision behavior patterns in buying a new business and how? What triggering events will affect their patterns and how? To achieve these aims, a conceptual framework is developed in the paper to explain the buying behavior with reference to the literature on strategic decision making process. They are generally labeled as rational mode, emotional mode, political mode and intuitive mode. Triggering events that have been reported in the studies of entrepreneurs’ venturing are assumed to be the drivers of initiating the buying decision. Based on literature review, triggering events are found to impact various types of decision process. In order to confirm whether or not there is any logical relationship between these two sets of variables: i.e. triggering events and types of decision process in the context of buying a new business, we propose to a) conduct exploratory in-depth case studies to identify what triggering events are prevailing and how they lead to different types of decision to buy a new business and b) confirm the relationship between triggering events and types of decision process by using survey data. At the start, in-depth case studies approach is a more preferable method as it could provide more practical insight and rich information on the decision process, which would enable the researchers to draw more meaningful explanations and to generate possible decision patterns. With reference to past studies, it is found that positive triggering factors, e.g. seeking autonomy and independence, grasping venture opportunity, striving for higher profit, and etc. are more related to rational, intuitive and political decision making style while negative triggering factors, e.g. layoff, family pressure, job dissatisfaction, and etc. will lead to more emotional decision making style. Interpretations are given in the paper with reference to psychological state of entrepreneurs when they make decisions to buy the new business under different triggering events. The implications of our proposed framework are: a) entrepreneurs who intend to start up new
ventures might consider the approach of buying the existing small business instead of starting the business from scratch but cautions must be made with regards to the decision process in the buying situation, i.e. the decision process that is appropriate to specific buying situation; b) the process of buying an SME across country and culture (e.g. local entrepreneur buying an overseas small business or foreign entrepreneur buying a local small business), would be more complicated but the general principle of decision style would be equally applied; c) potential entrepreneurs who are driven to start up the business by buying an existing business due to strong negative triggering events should be alerted as they would tend to behave emotionally in their buying decision process. In conclusion, the development of theoretical framework in this paper would form a basis for further research direction in entrepreneurs’ strategic decision making in the context of buying a small business as a form of startup and would also contribute to the practice of how an entrepreneur behaves in buying a small business.

Introduction

Entrepreneurs can start a business in three ways: starting a business from scratch, buying a franchise or buying an existing business (Steingold, 2005). Steingold (2005) and Melles (1996) suggest that there are many advantages of buying an existing business, compared to other two major forms of business start-up. For example, it can obtain an existing customer base, gain immediate cash inflow if the existing business has been running quite well and have lower risk of business failure given the proven record of successful operation. However, buying a business is not without problem. Taulli (2002) points out, for example, there is always a high hidden risk of failure if the entrepreneur who buys the business is not capable and cannot execute the operation properly. Furthermore, he/she must be able to cope with strain on personal life, deal with crisis and make tough decisions. Lack of flexibility is another drawback for an entrepreneur to start up business by buying an existing one as both the business model and the business operation have been preset by the former owner and as such, it is difficult, though not impossible, for the new entrepreneur to make changes according to his/her own wish. In addition, the costs of buying an existing business are usually higher than those of starting the business on their own (Feldman, et al 2003).
Given the pros and cons of buying a small business to start up, people who intend to undertake such kind of activity have to face a decision with future commitment and long term consequence. Decisions of this type are “strategic” as they require a careful analysis and evaluation before they are made. Literature on strategic decision making process has been comprehensively documented but studies are usually conducted in the context of corporate decisions such as merger and acquisition, consolidation, downsizing, restructuring, diversification, etc. Very few studies were conducted on the decision making process of buying a small business as a form of entrepreneurial start-up. In this paper, we intend to develop a conceptual framework with an attempt to throw some light on the issue of how decisions to buy an existing business by entrepreneurs are made and what factors would affect their various decision processes. Specifically, the following research questions would be addressed:

1. What factors would trigger entrepreneurs to start looking for buying a business?
2. What is the decision making process of entrepreneurs in buying a business? Can the different processes co-exist?
3. How do the triggering events affect the decision making process in buying a business?
4. What factors would moderate the relationship between the triggering events and the decision-making process?

In order to develop a theoretical model to explain how triggering events, decision making processes and decision outcome of “buy” or “not buy” of an existing business are related, we would review the past studies in the following sections.

Triggering Events of Business Start-up
A brief review of past studies reveals that there are two closely-related explanations of entrepreneurial motivation to start-up – pull and push factors (Shapero, 1975, Gray et al, 1996). First, “pull” factors are opportunities that draw individuals into self-employment. This may come from a potential partner, mentor, parent (or relative), investor, particular customer, or market opportunity. They usually provide positive support to making decision to start-up a business. Second, “push” influences are necessity-driven and refer to the negative aspects of a potential entrepreneur’s present economic/employment situation that cause him or her to look for something else, either another job or a start-up (Shapero, 1975). In this respect, one is either forced to pursue entrepreneurial activity, i.e. starting up a new business, or choose nowhere. Empirical studies characterize entrepreneurs as misfits, rejects from society or displaced individuals (Shapero and Sokal, 1982 and Gray et al., 1996). Especially in small-firm-intensive rural areas, entrepreneurship is often chosen over unemployment. In such a case an individual may be “forced” to become an entrepreneur in order to secure a living in changed circumstances (Storey, 1982). Furthermore, according to Gilad and Levine (1986), the “push” theory argues that individuals are pushed into entrepreneurship by negative external forces, such as layoffs, job dissatisfaction, difficulty of finding employment, insufficient salary, or inflexible work schedule. Gray et al (2006) categorize push factors as having no job prospect, not satisfied with work, cannot work for others, badly needs money, fail out of school.

The “pull” theory contends that individuals are attracted into entrepreneurial activities seeking independence, self-fulfillment, wealth, and other desirable outcomes. The existence of tempting and possibly profitable business opportunities pull talented entrepreneur-minded individuals into the business start-up (Storey, 1994). In particular, pull factors are typically those
attached to self-fulfillment, like independence and autonomy (Huuskonen, 1992). Some other examples include the categories of great market opportunity, family business inheritance, applying own field of study, previous work experience, observed success of others, approached by partner, friends’ suggestions and given opportunity to buy business (Gray et al 2006).

Since 2001, the Global Entrepreneurship Monitor (GEM) has discussed two different types of entrepreneurship: necessity entrepreneurship and opportunity entrepreneurship. The difference between the two types depends on the motivation of an entrepreneur to start his/her venture. Opportunity entrepreneurs are those who start their businesses in order to pursue an opportunity, while necessity entrepreneurship is more requirement-based (Reynolds et al. 2005). The GEM’s categorization of opportunity entrepreneurs versus necessity entrepreneurs is quite similar to the framework of pull factors versus push factors in the entrepreneurship process. Furthermore, Amit (1994) proposes that “pull” entrepreneurs may perform better than “push” entrepreneurs, and those that can be classified as both “push” and “pull” type may be the most motivated of all.

Despite the distinctly different factors involved in the pull and push effects, Gilad and Levine (1986) suggest that the "pull" and "push" factors are not necessarily competing or mutually exclusive. It suggests that push and pull factors might co-exists at the same time within individuals. Therefore, they have developed a formula to measure the overall intensity of all the factors combined. However, Gilad and Levine (1986) did not state which specific forces within the push and pull factors are stronger or weaker. In developing our conceptual framework for further empirical analysis, the above mentioned pull and push factors are categorically grouped while their intensity of influence on various decision making type are hypothesized with the support of theoretical arguments.
Strategic Decision Making Process in Buying Business

Many studies have been conducted on how entrepreneurs decide to start a business. Vroom’s (1964) expectancy model establishes a common thread connecting many process-oriented explanations of entrepreneurial motivation. Current process models are implicitly or explicitly grounded in this basic conception: an individual’s intentions to become an entrepreneur are predicted by two questions: (a) Is entrepreneurship desirable? and (b) Is entrepreneurship feasible? The Vroom model explains that an individual will choose among alternative behaviors by considering which behavior will lead to the most desirable outcome. This is typically called rational decision making approach. However, Simon’s theory of bounded rationality provides a more realistic depiction of individuals’ decision processes (Simon 1947, 1955, 1983). Limited information processing and computational abilities, imperfect knowledge about the world and restricted time are among the conditions (internal as well as external) people must face when making decisions. There is no exception when considering buying a business. Though the entrepreneurs will have the opportunity to visit and observe the operation, collect necessary business information and talk to existing business owner/managers in the buying process, imperfect knowledge and time pressure still inhibit entrepreneur from exercising rational analysis to its full strength.

The cognitive approach provides an important perspective why some entrepreneurs accept an inordinate amount of risk even though, on average, they do not apparently differ in their risk-taking propensity. For example, Palich and Bagby (1995) find that entrepreneurs tend to be predisposed to cognitively categorize business situations more positively. Baron (1998) also finds that entrepreneurs have greater reliance on certain cognitive techniques, such as heuristics
and biases, in searching for business opportunities. Busenitz (1999) proposes that entrepreneurial risk may be explained by recognizing that entrepreneurs use biases and heuristics more, which is likely to lead them to perceive less risk in a given decision situation. The empirical data by Busenitz (1999) indicates that entrepreneurs do use representativeness more and are more overconfident than managers in large organizations in making their decisions. Baron (2004) and Michell et al. (2007) have further supplemented that cognitive approaches are robust and effective means of accounting for the role of the individual in the entrepreneurial process. In fact, the term “entrepreneurial cognition” has emerged to highlight the distinctive way in which individuals identify, evaluate and exploit opportunities. On the other hand, Morrison (2000) adds that culture also account for large part of the entrepreneurial decision. Decision to become an entrepreneur is largely affected by culture at four levels: national, regional, business and individual. Input to culture includes religion, education, politics, family, history, role models, etc. Ireland et al (2003) supplement that there are four distinctive dimensions of entrepreneurship: entrepreneurship mindset, entrepreneurial culture, entrepreneurial leadership and entrepreneurial resources. As a result, cognitive biases in making decision to buy business might come from the differences in culture related factors.

In addition to rationality perspective, Cunha (2007) suggests two more different modes to explain how entrepreneurial opportunities come into existence. They are the intuitive and improvisational perspectives respectively. In the intuitive perspective, entrepreneurs imagine the opportunity before it exists. In the improvisational perspective, entrepreneurs act in order to construct the opportunity. The above perspectives are similar to the approaches suggested by Mintzberg and Westly (2001): (i) thinking first – featuring science and facts, (ii) seeing first –
featuring art and ideas, and (iii) doing first – featuring craft and experience. In fact, emotions arise when a person is confronted with a real or virtual situation relevant to her well-being. This relevance may be direct or in imagination (Smith, 2000). It is a well-established and documented fact that the mood of a person influences cognitive activity and behavior (Bagozzi et al, 1999; Cohen and Areni, 1991). Emotional states play a major role in how people think, learn, remember, take risks, and evaluate complex social information (Bless, 2000; Cohen and Andrade, 2004). In the situation of buying a business, the entrepreneurs are required to interact with the existing business owners so as to understand better the operational issues and make evaluation before buying decision is made. In such process, the mood of the entrepreneur will certainly play an important role in affecting his/her judgment. Similar to emotion, intuition is argued to be a common influence on human decision making (Sadler-Smith, 2008). Bird (1988) refers directly to the importance of intuition in entrepreneurial activity. She argues that rational, analytic, and cause and effect oriented processes underlie formal business plans, opportunity analysis, resource acquisition, and goal setting, whereas intuitive, holistic, and contextual thinking inspires vision, hunch, an expanded view of untapped resources, and a feeling of the potential of the enterprise. However, which decision making process is engaged is affected by some internal and external factors. People are more likely to use heuristics rather than engaging in a more systematic analysis when there is no time to engage in lengthy analytical processes; when there is information overload; when the issue is considered not to be very important; and when there is little information available for making a decision (Pratkanis, 1989). However, Pech and Cameron (2006) argue that entrepreneurs’ decision making framework is also affected by many emotive and attitudinal filters including enthusiasm, audacity, fun, determination, gut instinct and intuition, confidence of can-do and emotional intelligence. Jayasinghe et al. (2008) also argue
that entrepreneurship research has been characterized by an over-obsession with logical rationalism and methodological functionalism. It has ignored the emotional dimension of the relations between structure and people. Lerner & Kelner (2001) develops an Appraisal-Tendency Framework that dramatically changed the worldview of emotional decision by demonstrating, for instance, that two mood states such as fear and anger, although both negative, can yield very different judgmental effects on decision making. To describe entrepreneurial emotions, Russell (2003) proposed four primary elements: (i) individual core affective states of entrepreneurs, (ii) affective qualities of entrepreneurial ventures, (iii) their interaction with core affective states evidenced in attributed affect, and (iv) emotional meta-experiences that involve a conscious experience of felt emotional states and processes.

Political decision making process is found very common in many studies of large and complicated decision situations. In the case of making decision to buy an existing business, we believe politics might be involved in different stages. Pfeffer and Jeffrey (1992) suggests that for political decision making, the problem definition stage is more concerned with establishing constraints and preferences of those involved in and affected by the decision. The decision making process is more dependent on others. When going through the three stages of decision making, i.e. definition of constraints and preferences, alternative generation, and gathering of information about alternatives, all people involved in the debate and discussion will serve to reduce the number of and differences between possible alternatives. Guler (2007) indicates that a potential reason for the persistence of decision errors in organizations is that political and institutional influences may interact with individual decision errors and produce adverse results.
Individual processes may interact with influences from within and outside the organizations, such as group dynamics among employees and pressures from external parties.

In summary, the above review indicates that the decision making process of buying an existing business is found not much different from other contexts. Entrepreneurs usually adopt the following approaches or their mixture in making decision to buy business: i) rational, with variations in bounded rationality and cognitive biases, ii) emotional, and sometimes based on personal feeling and past experience, iii) intuitive with cognitive biases and heuristics from various sources and iii) political decision making, which largely involves interaction with outside parties and consideration of balance of power during decision process. On the other hand, different decision making systems do not seem to be mutually exclusive of one another. In other words, individuals could be rational and emotional, or intuitive and political (dependent) or whatever mix at the same time. They may co-exist in any decision making process to supplement the individuals decision outcome. Moreover, Scott and Bruce (1995) identified five decision making styles which are similar to our review as above. They are labeled as: (i) rational: logical and structured approaches to decision making; (ii) intuitive: reliance upon hunches, feelings and impressions; (iii) dependent: reliance upon the direction and support of others; (iv) avoidant: postponing or avoiding making decisions; (v) spontaneous: impulsive and prone to making “snap” or “spur of the moment” decisions.

Since we argue conceptually that different triggering events will have different impact on the entrepreneurial behavior in making decision to buy an existing business, we will integrate all variables that have been reviewed in the above section and develop a framework for further
empirical testing. Based on theoretical arguments, a number of hypotheses would also be proposed after presenting the framework. As already pointed out in the introduction section, the decision outcome of adopting various processes is “buy” or “not buy” the existing business. The decision of starting business from scratch or buying a franchise is not considered in our framework.

A Conceptual Framework of Decision Making in Buying an Existing Business

Building upon the past studies in the literature review on entrepreneurs decision making process and venture creation, the following framework (Figure 1) is to present the impact of entrepreneurial triggering events (i.e. push and pull factors) on the decision making process and the decision outcome of whether or not to buy an existing business.

Figure 1: Theoretical Framework on the Impact of Entrepreneurial Triggers on Decision Making Process of Buying a Small Business
As shown in Figure 1, the entrepreneurial triggering factors are assumed to affect a person’s decision process to buy or not to buy an existing business. The interesting question that we would like to address is in what ways the decision process is affected. Conceptually, we argue that entrepreneurs will display different decision behaviors if they are triggered by different factors, such as push or pull. Moreover, different strength of intensity of push or pull factors would also affect the adoption of different patterns of decision process in buying (or not buying) an existing business.

1) The Effect of Push and Pull Factors on Emotional Decision Making Process

Kornhauser (1965) claims that conditions on the job would affect the individual’s values and value fulfillment which affect his level of satisfaction or frustration, and in turn affects his self-concept and mental health. The mentally healthy individual has a more rational set of values to begin with, and is more rational in the ways he goes about seeking them. The mentally unhealthy person probably has fewer and less ambitious values, has structured them into a less logical hierarchy, and is less capable of understanding how to achieve them.

Job dissatisfaction is an emotional response to a value judgment by an individual worker. If his/her job values are perceived to be frustrated, he/she will experience the unpleasant emotion of dissatisfaction. The intensity of these emotional reactions will depend on the importance of the values whose fulfillment is being frustrated by the work experience (Locke 1976). Also, it was found that stress at work, job dissatisfaction and a desire for early retirement are highly correlated (Denton et al., 2002; Luce et al., 2002) and usually lead to negative emotional feelings.
Armstrong-Stassen (1994) also found that layoffs are experienced as highly stressful and anxiety provoking both by the victims and survivors of job loss. In addition, Dahlstrom (1991) states that upon layoff, many are engaged in blaming themselves, and have forgotten to explore hidden opportunities more rationally by adapting to new skills, looking at the occupation from different perspective or access the possibility of starting one’s own business.

Many empirical studies confirm that entrepreneurs are higher in the desire for autonomy and lower in preference for job security than other people (Caird, 1991; Cromie & O’Donaghue, 1992). Moreover, Reynolds and White (1997) found that people engaged in the start-up process were scored higher on measures of autonomy and independence than a control group representing the overall population. Vesalainen and Pihkala (1999) also supports that the desire for independence increases the odds that a person will engage in the business start-up process. For many entrepreneurs, money is not the only reward that matters. They gain utility from greater autonomy, from broader skill utilization, and from the possibility of pursuing their own ideas (Benz, 2005; Hundley, 2001). Hence, persons experiencing positive affect tend to perceive objects, other persons, ideas, and almost anything else more favorably than individuals experiencing neutral or negative affect (Bower, 1991; Garcia-Marques et al, 2004). Another study by West (1997) suggests that entrepreneurs consider buying / investing into a business because they want to do their own thing, control their own destiny and not work for someone else. They want to make better use of their skills and abilities and to make money.

Based on the above discussion, it seems that entrepreneurs who are driven by pull factors do have much more personal interests and pursuit of “dreams” involved in the decision making
process like buying an existing business to start up. Although there might not be very strong pull factors, it is more likely that emotion comes into play due to the presence of “dream” or “hope for change” elements. On the other hand, entrepreneurs who are “pushed” generally suffer from some negative emotional swing. Their decision making process may also be affected accordingly. In particular, those individuals who suffer from strong push factors, i.e. layoffs or financial stress, are more in negative emotional state. Previous literatures have shown that they often become very emotional or even violent as compared to those merely suffering from mild job dissatisfaction or facing poor prospect. With pull and push factors combined, we propose the following hypothesis:

\[ H_1: \text{Entrepreneurs mostly likely adopt a more emotional decision making approach of buying a business when they are driven by strong push and weak pull factors.} \]

2) The Effect of Push and Pull Factors on Rational Decision Making Process

According to Elsbach & Barr (1999) and Sinclair (1988), people in unpleasant affective states (as in the case of weak push factors) but not to the extent of critical negative events, e.g. layoff (as in the case of strong push factors) tend to engage in a more effortful, systematic, piecemeal information processing, which leads to effective decision making when decisions require accurate, unbiased, and realistic judgments or systematic execution of a structured decision protocol. Also, Schwarz and Clore (1996) found that individuals who are in a sad mood (in the case of weak push factors) are more likely to adopt a systematic processing strategy that is characterized by bottom-up processing, with little reliance on pre-existing knowledge structures and considerable attention to the details at hand.
Praag and Cramer (2001) found that people would become entrepreneurs if the expected rewards surpass the wages of employment. Because expected rewards depended on the assessments of individual ability and attitudes towards risk, perceptions of entrepreneurial feasibility are included in the calculation. Thus the model, like expectancy theory, finds entrepreneurial activity to be a function of feasibility and desirability. Levesque et al. (2002) further examined the choice between employment and self-employment in a utility-maximizing model that changes according to the individual’s age (i.e. stage of life).

Shane (2000) has shown that entrepreneurs discover opportunities that are related to their prior knowledge on markets, ways to serve the markets and customer problems. Choi and Shepherd (2004) further argues that entrepreneurs are more likely to exploit opportunities when they perceived more knowledge of customer demand for the product, more fully developed enabling technologies, greater managerial capability, and greater stakeholder support. Education is one of the most frequently examined components of human capital. Formal education is seen as providing the necessary cognitive skills to adapt to environmental changes of entrepreneurship (Hatch and Dyer, 2004). Highly educated entrepreneurs may be better able to deal with complex problems. They may also leverage their knowledge and the social capital generated through the education system to acquire resources and to identify and exploit business opportunities (Shane, 2003). On the other hand, formal education may inculcate attitudes that are antithetical to entrepreneurship (Casson, 2003). As a result, past studies did confirm a positive relationship between education levels and the likelihood of recognizing opportunities (Arenius and DeClercq 2005).
According to Evans and Bishop (2001), when entrepreneurs see a potential business purchase target, their analysis frequently begins by identifying and quantifying the synergies they could achieve through acquisition. They prepare a model that forecasts the target’s potential revenues if they own it, the adjusted expense levels under their management and the resulting income or cash flow that they anticipate.

Based on the above discussion, it seems that entrepreneurs tend to think through the process with cost-and-benefit analysis if they are triggered by weak pull factors. They perceive better prospect or fit their field of study if they possess higher market knowledge and are better educated. They would analyze the situation much more than others as they are relatively free from peer pressure or immediate needs. In addition to the weak pull factors, entrepreneurs who have weak or no push factors are less emotionally too. They do not have the urgency to leave a job due to strong dissatisfaction or layoffs and they tend to have more time to think through the process of entrepreneurship. Based on the above review and rationale, we hypothesize:

\[ H_2: \text{Entrepreneurs most likely adopt a more rational decision making approach of buying a business when they are driven by weak push and weak pull factors}. \]

3) The Effect of Push and Pull Factors on Intuitive Decision Making Process

Affect influences cognition involves the tendency to engage in heuristic processing, i.e. thinking that relies heavily on mental “shortcuts” (heuristics) and knowledge acquired through past experience. This has important implications for decision making and problem solving activities performed by entrepreneurs on a regular basis and that can strongly influence the success of new ventures (Mackie and Worth, 1989). People in pleasant affective states tend to
categorize stimuli in a broader, more inclusive, and more flexible fashion, which often enhance creativity and performance on complex tasks (Staw & Barsade, 1993, Isen et al, 1987). Furthermore, past studies have also shown that affect may assist or impede access to intuitive processing; for example, negative mood states may predispose an individual to engage in rational analyses to a greater extent (Elsbach & Barr, 1999; Sinclair et al., 2002).

Sun (2008) discovers that many people often take extra time to consider existing information. They do so possibly in order to acquire more information, or even to “wait” in the hope that new information may be forthcoming before they make a decision. However, when people are in a negative emotional state they prefer to take immediate action rather than wait to get out of their emotional state.

Research findings indicate that persons experiencing positive affect are more likely than persons experiencing negative affect to engage in heuristic thought (i.e., to rely on previously acquired “rules of thumb” and previously gathered information) in dealing with current problems or decisions (Park and Banaji, 2000). It supports the findings by Schwarz and Clore (1996) that individuals who are in a happy mood are more likely to adopt a heuristic processing strategy that is characterized by top-down processing, with high reliance on pre-existing knowledge structures and relatively little attention to the details at hand.

Based on the above brief review, we conclude that entrepreneurs who are strongly pulled by positive factors are generally in very good mood pursuing lifelong personal dreams or imminently better opportunities. On the other hand, as strong pushed entrepreneurs who are
strongly pushed by negative factors will not have much choice and may do anything quickly to get out of the negative mood state. Since the entrepreneurs are being strongly pushed and pulled at the same time, they may tend to think in a big picture without much consideration of the details in making a “buy or not buy” decision. In brief, we propose the following hypothesis:

\[ H_3: \text{Entrepreneurs most likely adopt a more intuitional decision making approach of buying a business when they are driven by strong pull and strong push factors.} \]

4) The Effect of Push and Pull Factors on Political Decision Making Process

Pfeffer and Jeffrey (1992) suggests that for political decision making, the problem definition stage is more concerned with establishing constraints and preferences of those involved in and affected by the decision. The family is one of the most important influences on major life decisions, such as the determination of a career path and the decision to start up a business. Individuals coming from families where there is entrepreneurial activity are much more likely to set up a business as well (Mancuso, 1974). According to Gray et al (2006), family background (finding a role model) is important to one’s decision to become an entrepreneur. The same principle can be inferred in the case of buying an existing business. The entrepreneurial environment as well as parental guidance and support appear to be conducive to fostering entrepreneurial traits such as risk-taking, independence, creativity and achievement. The self-employed parent becomes a role model and a mentor to the nascent entrepreneur and is usually inclined to encourage entrepreneurial behavior.

In the case of strong pull situation, entrepreneurs may be presented with an imminent business opportunity or invited by family members or close friends to start a business. It is more
about choosing one’s career path and assessing the risk-taking ability of becoming an entrepreneur. Previous research has shown that other parties, including family and friends, are often involved in the decision making process. The decision making process is therefore more “dependent” on others. At the same time, in the case of weak push, the entrepreneurs may not be suffering from any strong push factors like layoffs or major job dissatisfaction. The entrepreneurs may be under immense amount of family/peer pressure or influence for the decision they make about their career. In sum, the following hypothesis is established to reflect the above arguments:

\[ H_4: \text{Entrepreneurs most likely adopt a more political decision making approach of buying a business when they are driven by strong pull and weak push factors.} \]

5) The Effect of Moderators on Decision Making Process of Buying Existing Business

In addition to capturing the effect of triggering events (i.e. push and pull factors) on decision making process of buying existing business, it is obvious that many other internal and external factors will moderate the relationship between the above two determinants. Based on observations and knowledge of past studies, we can argue that there are mainly three moderating factors: i) economic environment, ii) relevant experience of the entrepreneur and iii) personal wealth of the entrepreneur. The rationale of incorporating these moderators in our conceptual framework is illustrated as follows.

According to the Global Entrepreneurship Monitor 2007 (GEM) reports, entrepreneurial activities are strongly related to the individuals’ economic outlook, i.e. the more positive the economic outlook is, the more people engaged in entrepreneurial activities. The report also found
that entrepreneurs are generally wealthier than non-entrepreneurs to start off with. With regards to the effect of individual wealth on entrepreneurship, the study of Holtz-Eakn et al. (1994) found that the probability of becoming an entrepreneur rises with the size of the wealth inheritance by the potential entrepreneurs (who are also the potential buyers of existing business). Also, according to Messner (1995), up to 48% of the 150 executives surveyed in his study would make the move to become entrepreneurs if they have enough capital. Similarly, Praag and Ophem (1995) find that wealth is a one of the necessary requirements for becoming entrepreneurs. They also find that a first start in entrepreneurship requires the support of assets or collateral.

In term of previous relevant experience, Cooper (1985) reports that in a broad cross section of industries, seventy percent of all founders pursued opportunities are closely related to their previous employment. Similarly, Bhide (1994) also finds that more than seventy percent of all founders had replicated or modified an idea encountered through previous employment. In sum, Gaddam (2007) states that economies, personal financial base and work experience are factors affecting entrepreneurial behavior. Hence, we propose the following hypothesis for further empirical analysis:

\[ H_5: \text{Economic environment, relevant experience and personal wealth will moderate the relationship between the \textquote{push and pull} factors and the decision making process of buying an existing business.} \]

\section*{Conclusion}
Entrepreneurs can start up the business by buying an existing business. Past studies suggest that there are advantages and disadvantages of using such approach as compared to other alternatives, e.g. starting from scratch or buying the franchising. Hence, making decision to buy a business is critical to entrepreneurs. Drawing from the literature on the areas of strategic decision making and entrepreneurial start up, this paper is intended to offer some preliminary explanations on how triggering events are related to the decision process to buy an existing business. It is expected that a theoretical framework could be developed and would contribute to both academics and practitioners in better understanding the under-explored knowledge gap on the entrepreneurs’ behavior of buying an existing business. The highlights of our review and conceptual development could be summarized as follows.

First, based on comprehensive review of past studies, we conceptually assert that precipitating events are prevailing in driving entrepreneurs’ intention to set up business by initiating their effort to consider buying an existing business. Second, triggering events could be generally categorized into “push” and “pull” factors, of which push factors produce negative impact while push factors induce positive driving force when entrepreneurs consider making the ‘buy’ or ‘not buy’ decision. Thirdly, similar to prior studies in strategic decision making process, the decision making patterns of buying an existing business could be typically grouped into five major types: rational decision making, emotional decision making, intuitive decision and political decision making. Fourthly, it is conceptually argued, with the support of theories drawn from the perspective of organization psychology that different types of triggering events will lead to different types of decision process in buying existing business. It is hypothesized in our analysis that the presence of both push and pull factors will affect the use of various types of decision
making process, depending on the intensity of the strength of the factors. The following table summarizes the possible combination matrix. Lastly, our framework also incorporates three moderators: economic environment, relevant experience and personal wealth, because it is evidenced from past studies that they might affect the relationship between the triggering factors (i.e. push and pull) and decision making process of buying business.

**Figure 2: Decision Making Matrix with Push and Pull Factors**

With regards to future research direction, we suggest to test our proposed hypotheses with empirical studies within the conceptual framework. By so doing, we can take one step further to confirm the consistency of all variables included in the framework. In brief, the development of this conceptual framework will act as a bridge covering the gap between the two separate and widely research knowledge bases: entrepreneurial venturing and strategic decision making process.
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An Exploratory Study on the Development of Social Enterprises in China: Does Context Matter?

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Abstract
Social enterprises (SEs) are ventures established to meet both economic and social needs and their sustainability largely rests on sufficient funding either drawn from public donations, subsidies and sponsorship or from the ventures’ internally generated profits, which depends on the SEs’ efficiency and profitability performance. However, both the internal mission and public expectation would usually drive the social enterprises into a conflict of how the social contribution and economic performance could be balanced. It is obvious that the operations of SEs are usually small in scale, and their market scope is limited and mainly community based. The emergence of SE sector is relatively earlier and therefore more developed in the Western studies on this area, e.g. their conception, drivers for and the process of establishment, and operation mode, etc. might not be directly applicable in other contexts. The primary aim of the paper is to report our study on the general development of social enterprises in China with particular focus on whether or not their development is affected by macro and institutional context, and examine how it is affected. Specifically, the questions of how the context in China will shape a) the conception of SE entrepreneurs, b) their personal driving forces in setting up SEs and c) their strategies and modes of operations would be addressed in our study. To explore the above issues, a qualitative approach is adopted. The results of our analyses confirm that both the macro and institutional context is not conducive, sometimes very inhibitive to the early formation and continuing development of SE ventures in the future. In this connection, the paper presents specific examples and elaborations on cases of how the above conclusions are drawn. It is believed that our results on the conception, the drivers and the formation process that the social entrepreneurs experience and the issues they face are somewhat different from the western context. Therefore it will render a great opportunity for researchers, policy makers and practitioners to draw theoretical and practical implications.

Introduction
Social entrepreneurship (SE) is emerging as a new discipline of study in recent years. Drawing from the knowledge of private or commercial entrepreneurship and bearing in mind with a nonprofit focus on social value creation, SE ventures are established to meet both social and economic needs (Austin, Stevenson & Wei-Skillern, 2006). Although the definition and
fundamental conception of social entrepreneurship has been discussed and documented in recent literature (see Dees & Anderson, 2003; Austin, Leonard, Reficco, & Wei-Skillern, 2004; Thompson, 2002; Chell 2008), its theoretical underpinnings and applications in various contexts has not been adequately explored. The paper is intended to report on a preliminary study in the mainland China, where the economy is in a dynamic change and SE ventures are relatively underdeveloped compared with the West, The main objective is to investigate the rationale of why social entrepreneurs develop their interests in start-up SE ventures, the process of how SE ventures start up, and the problems they encounter during the founding and operation process. Furthermore, the study will also examine the effect of institutional context on SE ventures’ development in the mainland. We believe the results of our study would be of particular relevance and value to academic and SE practitioners for future reference.

**Method of study**

Owing to the reasons of lack of understanding on social entrepreneurship in the Mainland the exploratory study in nature and limited studies on the issues and development of SE ventures in the mainland context, we decide that a qualitative approach would be the most appropriate method at this stage. Throughout our study, an open-end survey method and a series of in-depth focus group interviews with potential social entrepreneurs and those who are undertaking and running SE ventures are used as research tools. Based on our contact with the British Council in China, we got access to a large group of participants in the Mainland who joined the skill training program for social entrepreneurs in October and November 2009. Participants are invited to fill in an open-ended questionnaire so that their background, conception and operating contexts on SE ventures could be explored. To collect more comprehensive information on the
operation and development of their SE ventures, we conducted in-depth focus group interviews with selected participants at two training sites, i.e. Chengdo and Shenzhen. Since we aim at gathering rich information at the exploratory stage, the sample frame is not supposed to be representative and systematic. At the end, there are 23 valid survey questionnaires collected and 12 in-depth focus groups, 6 groups on each site. The groups are formed on the basis of years of establishment so that participants’ interaction and discussion could be enhanced during focus group sessions. In the following sections, we shall present the analyses on the development of social entrepreneurship in the Mainland with reference to the data we collected.

**Conception of Social Entrepreneurship in China**

Social entrepreneurship can be defined in broad and narrow senses. For example, Dees & Anderson (2003) suggests that social entrepreneurship refers to innovative activity with a social objective in the for-profit sector or in social-purpose commercial ventures, or in corporate social entrepreneurship (Austin, etc., 2004), or across sectors (Dees, 1998). But in narrow perspective, it refers to the phenomenon of applying business expertise and market based skills in the nonprofit sector (Reis, 1999; Thompson, 2002). The common feature across all definitions is to create social value by innovation and to address social problem. Thus, social entrepreneurship is not just defined by its legal form as it can exist in the nonprofit, business, or governmental sectors. A broader conceptualization of social entrepreneurship is as follows: an innovative, social value creating activity that can occur within or across the nonprofit, business, or government sectors.

According to our survey data, it is found that there is a common understanding among social entrepreneurs in China that the main target recipients of SE ventures are the “poor”, the
“handicapped”, the “minority”, the “weak” in the society. Therefore, it is literally for the social entrepreneurs to pay pity to this particular group of people. As a result, social entrepreneurs do not care too much who the customers are but more concerned who the recipients are. For instance, one typical response from the in-depth interview is as follows:

“We should strive to fight for the benefits and survival on behalf of the minority group; they are unlucky and abandoned by the community and therefore, we, as social entrepreneur, should do something about the unfairness.”

Due to such underpinning conception, it is difficult for SE ventures in China to sustain economically.

In terms of objectives of SE ventures, it is revealed in our study that China’s social entrepreneurs places social value on top of economic benefits. Contrary to the tradition belief that SE ventures should achieve a balance of social objective and economic objective, priority is always given to social contribution in China. Social enterprises must bear social responsibilities at any costs. Their existence can only be justified when they contribute and help in solving social problems. Profit distribution is said to be the criteria to distinguish social enterprises from private enterprises. The respondents in our survey point out that profits derived from private enterprises should belong to the entrepreneurs, senior management and shareholders themselves while profits of the social enterprises should be ploughed back completely to the society and therefore, profits should be owned by the public. Our respondents did emphasize in our survey and interview results that making profit is the mean for social enterprises while the end is to provide social benefits to the public. The different perspectives of welfare orientation and profit orientation as a way of distinction between the two types of enterprises is mainly attributed to the
traditional upbringing of people in China whereby communist philosophy is the guiding principle in their ways of life.

However, the perception on the operation model used by SE ventures in China is somewhat very similar to other main stream of thought in the West. In general, the respondents in our study agree that the business model used in private enterprises should be equally applied in social enterprises so that the business viability and sustainability are to be maintained. Both SE ventures and private enterprises have to take care of the markets, customers, finance, purchase, people management, and etc. Like private entrepreneurs, social entrepreneurs should also be innovative in offering products and services to meet customers’ needs; they should be well trained in management skills so that the ventures can be run in a cost effective manner; they need to apply marketing techniques, e.g. branding, promotion, public relation (media communication) to generate revenue and profits. In addition to those personal characteristics found common among different types of entrepreneurs such as innovativeness, flexible responses to market, quality orientation, missionary leadership, high achievement need and high level of persistence, most respondents suggest that social entrepreneurs should possess “passion and love”, “social value orientation”, “high concern on social responsibility”, and “driven by social changes and reforms”.

**Entrepreneurial Development Process of SE ventures in China**

The majority of studies investigating venture creation in the entrepreneurial process have been conducted in the private sector. The description usually involves entrepreneurial behavior relating to functions, activities, and actions associated with perceiving marketing opportunities and the creation of organizations to pursue them (Bygrave and Hofer, 1991; Aldrich, 1995). Katz
and Gartner (1988) developed a useful pre-venture creation model consisting four major properties, namely, intentionality, resources, exchange, and boundaries. On the other hand, many models map the process of new venture creation into a series of stages, including the sequential stages of activities of opportunity recognition, resource acquisition and opportunity exploitation (Bhave, 1994; Hills, Lumpkin, & Singh, 1997; Shane & Venkataraman, 2000). Other models consider post-start up activities, which cover further development of the venture beyond creation stage (Chell, Haworth, & Brearley, 1991; Bolton, 1997; Flamholtz & Randle, 2000).

Due to the increasing recognition of nonprofit sector at policy level by governments in Europe and the U.S. and its potential to generate social and/or environmental benefits in addition to economic gains, social ventures receive increasingly more attention from policy makers, academics and practitioners. Since its funding model is different from private entrepreneurial ventures, which could be a combination of earned incomes, service delivery contracts, grants, sponsorship, and donations, its creation process and development path might be conceptually and practically different from the private entrepreneurial ventures as described above. Austin, Stevenson and Wei-Skillern (2006), for example, applied the PCDO (People-Context-Deal-Opportunity) model (Sahlman, 1996) in SE venture and proposed a new framework to explain social entrepreneurship. Four major components are identified to deliver on the core SVP (social value proposition): the opportunity, people, capital, and context.

Another model to describe the process of new social venture creation with specific reference to the local community environment is proposed by Haugh (2007). Six stages are identified in her qualitative case studies of social ventures: opportunity identification, idea articulation, idea ownership, stakeholder mobilization, opportunity exploitation, and stakeholder reflection. In addition, it is also found that a formal support network and a tailor-made support
network are also part of the model in contributing resources to the new social venture throughout the stages.

All the above discussed models of SE venture creation are developed in the scenario of western cultures while specific research in a contrasted institutional context is lacking. Aldrich (1995) pointed out the process of venture creation could be very different as a result of various evolutionary paths in different institutional environments. Mainland China offers a typical example of this kind. The following sections describe the path of development of SE ventures in China based on our analysis of the real case stories in the survey and in-depth interviews.

The ideas of initiating the set up of SE ventures in China largely come out of the mind of the social entrepreneurs from their personal experience and observation of unsolved but immediate social problems. For example, one social entrepreneur sees the need of poor women in the village farm to improve their livings and enhance their status in the male dominated families. She then initiates to establish an association for women development in a community and use her knowledge of micro finance to lend money to poor women in the village with favorable term so as to facilitate them to run some micro businesses. Many beneficiaries become more economically independent in the family and gain higher social status and earn public respect. Another social entrepreneur sees the need of helping the weak minority group (the handicapped, the AIDs, etc.) to increase incomes to maintain their basic living standard by selling the handmade arts and crafts. He finds that the price paid by shops is too low, which is considered as exploitation of inferior class in the society. Recognizing the fair trade concept, he sets up a company to negotiate with all buying organizations, e.g. retailing shops, wholesalers and other institutions, on behalf of the minority group members who are individual suppliers and producers of arts and crafts. There are many similar examples in our data analysis of how social
entrepreneurs recognize the social need of people who might be unemployed, or who might lose
the earning power due to social/policy/family/personal changes, and therefore they come up with
the idea of helping them out in some ways. Interestingly, creation of SE ventures in China is not
a systematic process of seeing the market need and filling the need by offering what the
customers want. Actually, the creation process is simply based on the premise of helping people
solve some difficult problem or improve the living standard. The idea of SE ventures is
spontaneous, community and regional based, always related to living standard, and totally not
market driven, nor opportunity oriented. There is no doubt that the core social value proposition
(SVP) is vital in all SE ventures but the consideration of fulfilling market opportunity is equally
important if they are to be sustainable in the later stage. By the standard of dual objectives of
social enterprises, many SE ventures in China cannot survive for long.

In making the idea work after identifying the social need in the first stage, SE
entrepreneurs in China have to face two major challenges. First, they have to spend time and
effort to develop relationship with people as networking is crucial in doing business in China.
Social capital is one of the major assets that many respondents claim to possess in our study and
they all have already built a strong lie with various parties concerned. In fact, the analysis of our
data suggests that stakeholders’ networking process has been started and continued at the same
time when the idea of forming the SE venture is generated. Second, social entrepreneurs in China
have to sort out the legitimacy problem as there is no clear guideline on how SE ventures are
formally registered. Legal status of NGOs and government agencies are clear and registration
process should be undertaken under the administration of Public Affairs Bureau. However, social
enterprise is a new product in China and there is no specific policy governing its registration and
operation. At the moment, some respondents indicate that their SE ventures can register under
Public Affairs Bureau and their incomes are not subject to taxation while others report that they register in the Commerce and Industry Bureau while their incomes are subject to corporate profit tax. Moreover, there are still some cases that are not formally registered in China despite the fact that they have been operating in the market.

Not like private enterprises, financing SE ventures is not a big problem in their development process. Raising fund through debt market or equity market for expansion of SE ventures is rare. It is found in our study that the major constrain for development of SE ventures in the Mainland is due to the lack of sustainable business model. As it has been pointed out in the previous sections, the idea of SE ventures is usually based on filling social need instead of grasping market opportunity, it is imperative that all effort would be directed towards maximizing social benefits for the community and thus ignoring the economic existence of SE operations. As revealed in many cases of our study, when initial capital is exhausted, the SE venture cannot be further developed without the support of revenue from its own operation. A few of them can sustain either because they are lucky to start with the idea of balancing market driven mission as well as social value mission, or because they start with a successful and profitable private enterprise, i.e. and branch out a social enterprise for the sake of fulfilling social responsibility. This is a typical model called quasi social enterprise, a parallel operation of both types. Alternatively, it is also found that a few social entrepreneurs start the SE ventures initially to fulfill the social objectives and then change parts of their operation into private enterprises so that the income drawn from this sourced is used to support the continuous operation of the SE ventures. In conclusion, a number of mixed models are found in our case analysis, which are unique and worth further examination.
Issues of Social Enterprises Development in China

Alongside with the development path of SE ventures in China, it is found that both the formal government support network and informal institutional network are important determinant, either facilitating or inhibiting the quality, magnitude and speed of their development. For examples, many respondents report that many government departments, government agencies, semi-government bodies (British Council is an example of this type), universities and research institutions, public welfare organizations, private/public foundations in support of social enterprises, etc. provide tremendous assistance in enhancing the awareness of social entrepreneurship and upgrading the skills of social entrepreneurs in planning and running SE ventures. However, the main issue raised by the respondents is that such positive effort is not coordinated and sometimes fragmented and overlapped due to the widespread geographical dispersion across regions in China. A strategy of using community local based approach or country wide based approach to SE venture development should be evaluated in terms of its costs, benefit, timing and priority of community need.

The pendulum principle of swinging from NGO to social enterprise and back to NGO is still applied in China. According to our analysis, many NGOs transform themselves to social enterprises and strive to earn incomes from their own operations. After sustaining for a few years, they suffer from insufficient incomes due to ineffective business model or poor management and therefore turn back to NGOs again, looking for financial support from sponsorship, donation and public funding. It is obvious that the fundamental reason for failing to maintain to be a SE venture is the absence of a sustainable business model. The problem of poor management skills in running SE ventures can be overcome by training and upgrading of people quality but the lack of a workable business model is a difficult condition to meet. The issue is related to the pre-
venture stage, in which social entrepreneurs is too much overwhelmed by seeing social needs in the process of idea generation. A check on demographic background of social entrepreneurs in China provides a cue that why their perspective is biased toward social value orientation. In fact, very few of them in our study have gained business related experience and/or received similar training or education, implying further that their marketing perspective is quite limited. It will therefore be not surprising to see that the SE ventures are set up without reference to market opportunity and business model of any kind.

The third major issue identified from our study is the recognition of the value of social enterprises in China by various stakeholders, including central and local government, NGOs, public/private foundations, media, academic institutions and the public. At present, government policy toward social enterprise with regards to its roles, functions, legal status, operational scope, methods of finance and tax issue are not clear and varied from one geographical region to others. Public receptiveness is another major concern as most people believe that social enterprises should be the same as NGOs and some even consider as government agencies. The contextual environment is not conducive to the development social entrepreneurship if all stakeholders hold the view that they are just another category of charity organizations or NGOs.

The conflict of meeting social need and maintaining economic sustainability is another issue that are more critical in the context of communist and socialist philosophy like mainland China. The respondents in our focus group interview express their deep concern on whether the primary role of social enterprises is to achieve social objectives. Debate on the conceptualization of social entrepreneurship is controversial as arguments for and against the importance of obtaining economic profit for SE ventures are not conclusive. It further implies that the social entrepreneurs who are now running the ventures in China are still struggling on whether or not
they should make profit by charging their stakeholders, e.g. suppliers, distributors, customers and the public, etc. who belong to the minority groups. Some debates are even raised to the ethical and moral level. The dilemma that exists in China is due to the ideology problem but it leads to the eventual development and operational problems.

**Conclusion**

This paper is the first attempt to explore the conceptualization, processed and issues of social entrepreneurship in China. First, based on our survey data and focus group interview, it is found that contextual environment do make a difference in the fundamental understanding of social entrepreneurship by those who are running SE ventures in China. Secondly, the perceptual differences contribute to various perspectives in defining the objectives of SE ventures. The mixed views on social and economic objectives are prevailing among social entrepreneurs due to the transition from traditional socialist ideology to socialist market economy. Thirdly, after examining the detailed development process of SE ventures in China, it is found that the stages of development are generally not much different from the literature. However, the idea generation process in China is initiated by seeing the social needs rather than the market needs. So the core social value exists at the pre-venture stage. In the formation stage, stakeholders networking and legitimacy are relatively more crucial than those in the Western context. Opportunistic behavior of social entrepreneurs is also found occasionally when things cannot get done through formal approach. Lastly, some peculiar issues are identified in such a unique context. They are as follows: i) no coordinated approach and/or model for the development of SE ventures, leading to waste and overlap of resources at the national level; ii) lack of sustainable business model for SE ventures throughout their development; iii) lack of macro and micro-level
policies governing the operation, role and functions, etc. of social enterprises, iv) the insufficient recognition on the value of social enterprises which inhibit their future development. In sum, it is strongly believed that social entrepreneurship in China would be flourished and developed more rapidly if the contextual environment as highlighted in the above sections can be improved and government can formulate more conducive policies to facilitate the formation and strategic development of SE ventures. The study reported in this paper contributes to better understanding on the issues that we should focus to resolve and, on the other hand, it also bring more reference to practitioners in social entrepreneurship when they consider to develop and operate their SE ventures more effectively.

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How Legislative Requirements Impact the Entrepreneurial Orientation of Social Enterprises: 
An Empirical Study

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How Legislative Requirements Impact the Entrepreneurial Orientation of Social Enterprises: An Empirical Study

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Abstract
This paper analyses 154 Finnish firms with respect to the potential constraints legislative requirements impose. The legal requirements create an environment where these firms cannot create a sustained competitive advantage - at best it can be described as an artificial advantage. Results also show that while the entrepreneurial orientation is associated with the firms' ability to create a competitive advantage, these firms score below average on all three dimensions of entrepreneurial orientation, which raises a justified question: are these firms entrepreneurial? These firms seem to have been created according to legal requirements and an artificial opportunity provided by the government in need of solving a social and political dilemma, not the entrepreneur's desire to create social value.

Introduction
Social entrepreneurship as a field of research within entrepreneurship has emerged over the past decade (Dees 1998; Tracey and Jarvis 2007; Seelos and Mair 2007; Peredo and Chrisman 2006; Zahra, Gedajlovic, Neubaum, and Shulman 2008; Austin, Stevenson, and Weerawardena and Mort 2006). Yet the phenomenon as such is not particularly new. A related topic such as social welfare can be considered rather established in disciplines like economics, sociology, and even anthropology. However these studies rarely consider the potential entrepreneurial opportunities associated with this issue.

Much of research on social entrepreneurship can be considered attempts to sort out a quite massive conceptual confusion. Therefore much of available research is rather descriptive and conceptual (Dees and Anderson 2006; Dorado 2006; Mair and Marti 2006; Weerawardena and Mort 2006). This confusion originates from the fact that the aim of entrepreneurial ventures is to create
economic value. Within social entrepreneurship some researchers argue that social ventures should only create social value and in its purest form not at all pursue economic value. Others argue social ventures have to create economic value as this is a prerequisite for firm survival (Meyskens, Carsrud, and Cardozo 2010).

Moreover, in debating social entrepreneurial opportunities, the principles of free markets are automatically assumed to exist, and it is also assumed that one key component differentiating a social venture from “ordinary” ventures is whether the aim is to create social or economic value. To our knowledge, few studies exist which are concerned with the possibilities of legislative regulations governing the activities of social ventures. That is, the option that creating a social venture is not merely a matter of mission statement or declaration of strategic intent on behalf of the creator – the entrepreneur. That there may be nations that regulate this behavior considerably or even that it is politically not quite acceptable that private firms may take care of services and functions, which are considered to be the business of governments and states, does not seem to cross many researchers minds at all. This blindness results in the disregard of certain fundamental research questions that may be both important and relevant. In fact, this may point at the fact that social entrepreneurship is not a homogeneous concept when applied into a global context (although the problems social entrepreneurship attempt to solve most likely are global) and therefore, social entrepreneurship may have to be considered context specific and a unified theoretical framework may not evolve.

While a unified theoretical framework is lacking (Mair and Martí 2006), researchers are forced to apply those theoretical frameworks that are available, for example from the field of strategic management. Hence there are similarities between commercial entrepreneurship and social entrepreneurship and differences (Austin et al. 2006). Dees (1998) has identified the primary characteristics of social entrepreneurship as innovativeness, risk-taking, resourcefulness, accountability, and social mission. Other researchers have found innovativeness (Alvord, Brown,
and Letts 2004; Bornstein 2004), business model (Dees and Anderson 2006), and legal structure (Dees and Anderson 2003; Dorado 2006) to be distinct features of social ventures. These distinctive characteristics suggest that the input and output resources may be very different.

The resource-based theory (RBT) of the firm serves as a basis for analyzing a social venture’s resource management (Wernerfelt 1984) acknowledging that firms are heterogeneous regarding the resources they control. RBT, as it applies to social enterprises, focuses on looking inside an enterprise to determine their ability to grow. In social enterprises, the process and resources employed in creating social value are the sources of their ability to survive and grow (Meyskens, Post, Stamp, Carsrud, and Reynolds 2009). Using RBT offers a systematic analysis of mobilization and leverage of resources and how restrictions placed on those resources may hinder the creation of competitive advantage and subsequent growth.

In Finland, social enterprises have unique legislative requirements related to human resources. They are obligated to offer employment to the disabled and long-term unemployed for at least 30% of the total workforce of the enterprise, and at least one of the employees must be disabled. In addition, they have to produce goods and services according to commercial principles (Heckl, Aaltonen, and Stenholm 2007). This employment requirement is compensated through subsidies provided by the government; such as support for employing disabled individuals and special aid for starting social enterprises and establishing operations (Heckl et al. 2007). The fact that these firms have to operate according to commercial principles means they have to generate profit. To ensure profitability requires the ability to create a competitive advantage (Porter 1980). Based on the social entrepreneurship literature these requirements are highly problematic as it is generally assumed that the goal of social entrepreneurs is primarily social not economic.

This situation presents an interesting case for investigation, as this is the essential nature of Finnish social enterprises, as outlined by law. RBT assumes that all resources among firms are heterogeneous and mobile. Here, two of the resources are forced to be homogeneous in
nature (30% human resources and the financial resources received through stipends). This distortion in the natural ebb and flow of entrepreneurial activities present Finnish social entrepreneurs with a unique challenge that has yet to be explored. Clearly, effective management of resources is important in social enterprises, but as these are forced sets of resources for each enterprise to manage, these ventures may become dependent on public funding due to their obligation to act as work-integration enterprises (Heckl et al. 2007). Accordingly, this may mean they lose their entrepreneurial characteristics conceptualized here as entrepreneurial orientation (Covin and Slevin 1991) and ability to create a competitive advantage.

Finnish social enterprises provide a unique group for study allowing for empirical analysis of the entrepreneurial processes and the creation of economic and social value within a regulating legal environment. This study extends existing literature on the social enterprises by examining the potential constraints the legislative requirements impose on Finnish social ventures. We also argue that the legal constraints impact the entrepreneurial orientation of the firm in a negative way, that is legal regulations decrease entrepreneurial orientation and thus the firm is unable to create a sustainable competitive advantage and thus sustained growth.

**Competitive Advantage and Entrepreneurial Orientation**

In commercial entrepreneurship a requirement for sustainable business activity is for a firm to create a competitive advantage. Competitive advantage ensures profitability and is based on a firm’s ability to sustain growth (Porter 1980). While the concept of competitive advantage is problematic within the context of social entrepreneurship as it assumes a primary economic goal, and we know many social ventures have a social mission, we find it appropriate to include the concept in this study. The reason is found in the requirement in the Finnish Law, which explicitly requires these firms to operate by economic principles despite their social mission. Moreover, previous studies also suggest the human and financial resources, as well as the context of the social
value, have to be aligned in social enterprises (Austin et al. 2006). Thus, if these enterprises own or are able to acquire the particular resources and capabilities, the more likely they are able to react to the recognized opportunities and create value. However, if resource allocation is partly directed by legal requirements, it may hinder their value creation. Moreover, it is unclear if these firms are created based on “genuine opportunity recognition” or if they are created because the entrepreneur sees a way, provided by the government, to create a venture, which is kept afloat through subsidies. Thus, it is unclear if a firm’s ability to create a competitive advantage is “genuine” or “artificial”.

Hypothesis 1: Special legislative requirements are associated with social enterprises’ ability to achieve competitive advantage.

The Schumpeterian rationale for entrepreneurship in turn rests on the notion of a firm’s ability to innovate. Moreover, the vast stream of entrepreneurial orientation (EO) literature posits that EO, which is a firm-level construct, is dependent on proactiveness, innovativeness, and risk-taking (Covin and Slevin 1991; Miller 1983). Proactiveness refers to seeking and identifying new opportunities, which may be related to present operations or the introduction of products ahead of competition (Venkatraman 1989). Proactiveness thus reflects the notion of an ability to create a competitive advantage through the generation of high entrepreneurial profits (Wiklund and Shepherd 2005), that is the firms possess sufficient resources for this. Innovativeness – in line with Schumpeter (1934) – reflects the firm’s ability to create and support the creation of new ideas, new products or processes (Lumpkin and Dess 1996). Finally risk-taking reflects the ability to pursue opportunities even when the costs of failure are high or the outcome highly uncertain (Wiklund and Shepherd 2005).

Two of three distinct elements in EO have also been found be distinct for social entrepreneurship; innovativeness and risk-taking (Dees 1998; Alvord et al. 2003; Bornstein 2004). As proactiveness, ability to innovate and risk-taking contribute to firm performance, EO should be associated to a firm’s ability to achieve a competitive advantage. Thus, we assume that the social
enterprises in question have to be entrepreneurially oriented, that is they have to take risks, innovate and act pro-actively. As business entities they have to pay attention to the prerequisites of their continuity. Without this, they lose their entrepreneurial characteristics.

Hypothesis 2: Entrepreneurial orientation is associated with social enterprises’ ability to achieve competitive advantage.

Method

Data and Variables

The total population of Finnish social enterprises; 154 firms were analyzed. The firms were sourced from the register by the Ministry of Employment and the Economy, which they are required to maintain, by The Finnish Act on Social Enterprises, enforced in 2004. The number of registered social enterprises has declined relatively fast during February–April 2010. The decline was from 208 to 154. This may be partly due to the expected changes in the subsidies provided for employing disabled individuals.

Data was collected through an Internet-based survey targeted at the 127 firms, whose e-mail addresses we were able to access. In all, six firms’ e-mail addresses were not functioning, two firms informed that they were no longer social enterprises and two firms replied that they had closed their business. In all, three reminders were sent to the potential respondents. The 41 firms with no known e-mail address from the start were contacted via telephone. The ones that we got in touch with and from which we got an e-mail address were sent a link to the Internet-based survey. One respondent did the survey over the telephone. The final sample was 69 social enterprises (45 percent response rate). The analyses of non-response bias show that participating firms were slightly larger than the non-responding firms. However, there were no statistically significant demographic differences found between the first-wave and second-wave respondents.
**Ability for Competitive Advantage (CA).** The ability to achieve sustainable competitive advantage was measured in terms of five separate items. We examined social enterprises’ competitive advantage based on their physical, human, and organizational resources. The respondents were asked to answer statements using the five-point Likert scale. The reliability of the factor items was also acceptable (Cronbach’s $\alpha=.896$, see Appendix 1, Table 3 for the items).

**Legislative Requirements.** The legislative requirements set for the Finnish social enterprises were measured in terms of five self-reported items. The items comprised the subjective perception of the possible effects of legislation on firms’ innovativeness, development of the know-how, ability to get finance, development of competitiveness, and success in the markets. The respondents were asked to answer statements using five-point Likert scale. The reliability of the final composite variable was acceptable (Cronbach’s $\alpha=.886$, see Appendix 1, Table 5 for the items).

**Entrepreneurial Orientation (EO).** Entrepreneurial orientation was measured in terms of a modification of Miller’s (1983) scale. The respondents were asked to respond to eight statements about risk-taking behavior, innovativeness, and proactiveness of the firm. Miller’s (1983) scale or its modifications have been used in several studies (Covin and Slevin 1989; Wiklund and Shepherd 2005) to measure entrepreneurial orientation. Instead of using original pairs of opposite statements, we asked the respondent to answer statements using the 5-point Likert scale. One item that is “In dealing with its competitors, my firm typically initiates actions which competitors then respond to” was dropped out of the analyses due to its low communality value. The reliability of the composite variable was acceptable (Cronbach’s $\alpha=.851$, see Appendix 1, Table 4 for the items).

**Control Variables.** In addition to age, profitability (profit/turnover) and industry of the firm, the analyses were controlled for the social value creation of the social enterprises. This was
based on the self-assessed variable on their social values. Similarly, we controlled for the relative share of disabled workers in the firm, which was also based on self-reported numbers.

All the relevant variables, their descriptive statistics and correlations are shown in Table 1. There is a correlation between items measuring EO, but VIF statistics indicated no multicollinearity. The studied firms were 11 years old on average and they have been officially registered as social enterprises 2.7 years on average. The age of the firm varied from one to 65 years and the time as official social enterprise varied from five months to 6.3 years. More than half, 54 percent of the firms were operating in services, and the rest were either in trade (21 percent) or in manufacturing (25 percent). Their emphasis on social value was less than 50 percent, which may come as a surprise but can be attributed to the legal requirement of operating by economic principles. Still, the relative share of disabled employees (disabled and people with long period of unemployment) was 67 percent.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age of the firm</td>
<td>10.71</td>
<td>14.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Industry: services</td>
<td>0.54</td>
<td>0.50</td>
<td>-43**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Industry: manufacturing</td>
<td>0.25</td>
<td>0.43</td>
<td>-32**</td>
<td>-62**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Profitability</td>
<td>0.11</td>
<td>0.38</td>
<td>-01</td>
<td>-05</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Social value</td>
<td>41.87</td>
<td>22.53</td>
<td>-21</td>
<td>35**</td>
<td>-31*</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Share of disabled employees</td>
<td>67.41</td>
<td>30.33</td>
<td>-08</td>
<td>0.09</td>
<td>-0.20</td>
<td>-0.04</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Ability for competitive</td>
<td>3.40</td>
<td>1.08</td>
<td>-03</td>
<td>0.01</td>
<td>-0.07</td>
<td>-0.16</td>
<td>-0.07</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. EO</td>
<td>2.80</td>
<td>0.99</td>
<td>-06</td>
<td>0.02</td>
<td>0.05</td>
<td>-19</td>
<td>-14</td>
<td>-05</td>
<td>0.56**</td>
<td></td>
</tr>
<tr>
<td>11. Legislative requirements</td>
<td>2.24</td>
<td>1.02</td>
<td>-23*</td>
<td>0.23</td>
<td>-0.08</td>
<td>0.05</td>
<td>0.08</td>
<td>-0.13</td>
<td>-0.02</td>
<td>0.01</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, n=69

**Results and Discussion**

Our explorative results show that the studied social enterprises perceive their abilities to achieve competitive advantage relatively adequate (see Appendix 1, tables 3–5). They perceive that they work more efficiently than their closest competitors and that their personnel’s know-how is good enough to match competitors’ actions. On the contrary, their engagement in entrepreneurial
orientation, especially in risk-taking and innovativeness is weak or at best average. Among the studied social enterprises the role of legislative requirements is perceived less negative than expected. Their status as registered social enterprises has opened up a special source of finance. Accordingly, these enterprises do not perceive that legislative requirements would hinder their ability to access finance. In addition, these enterprises see that their success in the markets is not hampered by the legislative requirements. These findings suggest that Finnish social enterprises have adjusted their goals and operations based on their capabilities. At the same time, however, their tendency to behave entrepreneurially is less prevalent given the low scores on innovativeness.

<table>
<thead>
<tr>
<th>Table 2</th>
<th><strong>Entrepreneurial Orientation, Legislative Requirements and the Ability to Achieve Competitive Advantage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Base Model</strong></td>
</tr>
<tr>
<td></td>
<td>$\beta$</td>
</tr>
<tr>
<td>EO</td>
<td>.59***</td>
</tr>
<tr>
<td>Legislative requirements</td>
<td>-.03</td>
</tr>
<tr>
<td>Age of the firm_{lg10}</td>
<td>.03</td>
</tr>
<tr>
<td>Industry: Services</td>
<td>-.03</td>
</tr>
<tr>
<td>Industry: Manufacturing</td>
<td>-.13</td>
</tr>
<tr>
<td>Share of disabled employees</td>
<td>.10</td>
</tr>
<tr>
<td>Social value</td>
<td>-.06</td>
</tr>
<tr>
<td>Profitability_{lg10}</td>
<td>-.10</td>
</tr>
<tr>
<td>Constant</td>
<td>4.46***</td>
</tr>
</tbody>
</table>

$n$ (valid in analysis) | 69 | 69
$F$-test | 0.92 | 4.298**
$R^2$ | .03 | .36
Adj. $R^2$ | -.07 | .28
$\Delta R^2$ | .34***

Linear regression, enter-method: †$p<.10$, *$p<.05$, **$p<.01$, ***$p<0.01$

$DV$: Ability to achieve competitive advantage
All coefficients are standardised.

We tested our hypotheses with a hierarchical linear regression in which the self-assessed ability to achieve competitive advantage was regressed on EO and the legislative requirements. Our results show that entrepreneurial orientation is positively associated with the ability to achieve competitive advantage ($p<.001$). This supports our hypothesis H2 (Table 2). However, the assumed
association between the legislative requirements and the ability to achieve competitive advantage was not supported. Even if the descriptive statistics show that 2/3 of the personnel is disabled to some degree, it does not hamper the perceived ability to achieve competitive advantage. In addition, our results show that social value or the relative share of disabled employees is not associated with the perceived ability to achieve competitive advantage.

**Implications**

Our results indicate that Finnish social enterprises do not lack the unique bundles of resources necessary for sustainable competitive advantage. In addition, the studied social enterprises perceive that the legislative requirements to employ disabled individuals do not hinder their ability to achieve competitive advantage. This suggests that social enterprises may adjust their behavior, goals and market orientation according to their current capabilities. Thus, possible “below the average” productivity do not hinder their operations if the goals are adjusted accordingly.

However, the current trend of a declining number of Finnish social enterprises due to expected changes in financial support provided for employing disabled individuals suggests that these firms are relatively dependent on the external financial support, either through subsidies from government or some special foundations. This may indicate that the proposed adjustment is exogenous. This suggests that their value creation is mainly focused on fulfilling the legal employment requirements, and not on providing social value to a larger community as the primary mission. We do not claim that this value creation is incorrect nor should it be underestimated. However, results suggest that social enterprises under restrictive legislative requirements have highly demanding circumstances for securing their continuity and creating significant changes in the social, political, and economic contexts for marginalized groups (Alvord et al. 2004).

The engagement in entrepreneurial orientation is, however, positively associated with the ability to achieve competitive advantage in social enterprises. While this is a positive finding for
the future of social enterprises it is problematic as the respondents score below average or at best average on all three dimensions of EO. These firms seem to be created and exist out of legal requirements and an artificial opportunity constructed by government to deal with a social dilemma. For example, a firm registered as a social enterprise in Finland could be the result of an initiative taken by a foundation that sees this form of activity, including the subsidies it implies, as an opportunity to finance its activities (see The Law about Social Enterprises 1351/2003 4 § subsec. 1). Nevertheless, even if they are obligated to fulfill the legislative requirements, there seems to be some kind of seedbed for innovative and proactive behavior and thus a potential for competitive advantage. This may create a favorable basis for cultivating new innovations leading to wider social value creation. However, the steep decline in the number of social enterprises indicates their very strong dependency on external funding, which during economic recessions normally is tightened. This in turn indicates a clear weakness in their business model, which seems unable to sustain operations. Thus this would indicate that the competitive advantage at least in some cases is artificial rather than genuine. While EO is associated with competitive advantage the relatively low scores raises yet another question – especially with reference to Schumpeter’s notion of entrepreneurship containing the element of innovativeness; how entrepreneurial are these firms?

References


### Appendix 1

#### Table 3

<table>
<thead>
<tr>
<th>Ability for competitive advantage</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>We can produce our products/services more efficiently than our closest competitors</td>
<td>.867</td>
<td>3.62</td>
</tr>
<tr>
<td>We can produce our products/services with better quality than our closest competitors</td>
<td>.887</td>
<td>3.18</td>
</tr>
<tr>
<td>We can reconfigure our resources in a new way better than our closest competitors</td>
<td>.858</td>
<td>3.41</td>
</tr>
<tr>
<td>Our firm has unique know-how which is hard to imitate</td>
<td>.802</td>
<td>3.17</td>
</tr>
<tr>
<td>Our personnel's know-how is adequate to match our closest competitors</td>
<td>.801</td>
<td>3.58</td>
</tr>
</tbody>
</table>

Percent of variance: 71.2

Cronbach’s α: .896

*KMO = .808, Barlett's Test p < .001. Cutoff point was 0.40.*

Scale: 1=totally disagree, 5=totally agree

#### Table 4

<table>
<thead>
<tr>
<th>Entrepreneurial Orientation: Component Matrix</th>
<th>EO</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, our firm has a strong emphasis on R&amp;D, technological leadership, and innovations</td>
<td>.846</td>
<td>3.09</td>
<td>1.40</td>
</tr>
<tr>
<td>In dealing with its competitors, my firm is very often the first business to introduce new products/services or which employs new procedures</td>
<td>.825</td>
<td>2.80</td>
<td>1.37</td>
</tr>
<tr>
<td>Our firm has introduced very many new lines of products or services</td>
<td>.778</td>
<td>3.15</td>
<td>1.35</td>
</tr>
<tr>
<td>Changes in our product or service lines have usually been quite dramatic</td>
<td>.759</td>
<td>2.94</td>
<td>1.26</td>
</tr>
<tr>
<td>In general, our firm has a strong proclivity for high-risk projects with chances of very high returns compared to projects with normal and certain rates of return</td>
<td>.656</td>
<td>2.15</td>
<td>1.19</td>
</tr>
<tr>
<td>When confronted with decision-making situations involving uncertainty, my firm typically does not adopt a cautious, “wait-and-see” posture in order to minimize probability of making costly decisions as compared with a bold, aggressive posture</td>
<td>.632</td>
<td>2.58</td>
<td>1.11</td>
</tr>
<tr>
<td>In general, our firm has a strong tendency to be ahead of other competitors in introducing novel ideas or products</td>
<td>.574</td>
<td>3.22</td>
<td>1.30</td>
</tr>
</tbody>
</table>

Percent of variance: 53.4

Cronbach’s α: .851

*KMO = .808, Barlett’s Test p < .001. Cutoff point was 0.40.*

Scale: 1=totally disagree, 5=totally agree
<table>
<thead>
<tr>
<th>In your company the legislative requirements to employ disabled individuals may hinder...</th>
<th>Legislative requirements</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>... the development of the know-how</td>
<td>.607</td>
<td>2.23</td>
<td>1.21</td>
</tr>
<tr>
<td>... getting necessary finance</td>
<td>.748</td>
<td>2.11</td>
<td>1.17</td>
</tr>
<tr>
<td>... the development of the competitiveness</td>
<td>.789</td>
<td>2.27</td>
<td>1.18</td>
</tr>
<tr>
<td>... the success of the firm in the markets</td>
<td>.820</td>
<td>2.17</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Percent of variance 74.1
Cronbach’s α .882

*KMO=.761, Bartlett’s Test p<.001. Cutoff point was 0.40.
Scale: 1=totally disagree, 5=totally agree*
Obtaining Intangible Resources through Entrepreneurs’ Network Mix:  
A Multi-case Study of New Firms in an Emerging Economy 
by Zhaoping Liu, Cathy Hsu, and Songshan (Sam) Huang

Based on in-depth interviews of entrepreneurs in China’s economy hotel industry, the current study summarized the network mixes used by entrepreneurs to acquire intangible resources at different development stages of new firms. In the early start-up stage, entrepreneurs used many weak business ties. In the establishment stage, they relied on strong business ties, but they did not value personal network ties in the final growth stage. This research discovered that very few political ties were used to acquire human capital and knowledge, but some interviewees indicated that political ties were effective in other procedures such as obtaining funding and gaining legitimacy. Our analysis also suggested that network mixes used by entrepreneurs to acquire tangible and intangible resources are not identical.

Introduction

The resources-based view (RBV) suggests that heterogeneous and immobile firm resources are sources of sustained competitive advantage (Barney 1991; Wernerfelt 1984). Citing Daft’s (1983) definition, Barney (1991, p.101) indicated that “firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.” Resources are composed of physical capital resources, human capital resources, and organizational capital resources (Barney 1991).

Entrepreneurial firms face the liability of newness and often lack resources essential to their survival and long-term growth (Stinchcombe 1965). Many entrepreneurs have addressed
this liability by building networking capabilities and acquiring organizational resources through their personal network ties (Hoang and Antoncic 2003; Johannisson 2000; Slotte-Kock and Coviello 2010).

Previous studies have shown that entrepreneurs use different types of network ties at different development stages (Lechner and Dowling 2003; Lechner, Dowling, and Welpe 2006). Many researchers have explored the roles of strong ties versus weak ties during entrepreneurial processes (Bruderl and Preisendorfer 1998; Elfring and Hulsink 2003; Jack, Drakopoulou Dodd, and Anderson 2008). However, an important dimension of network ties has been neglected: political ties versus business ties. Furthermore, few researchers have distinguished network mixes used for acquiring intangible resources from those for acquiring tangible resources. No study seems to have compared the network mixes for acquiring explicit knowledge and obtaining tacit knowledge.

Using in-depth interviews with owners/top executives of 13 economy hotel chains, the current study has added political ties versus business ties as a new dimension in discussion of the network mix and explored how entrepreneurs in an emerging economy acquire intangible resources through different network mixes for new firms at the early start-up, establishment, and growth stages. Other objectives of this study included comparison of the network mixes used by entrepreneurs to acquire intangible versus tangible resources and those for acquiring explicit knowledge versus tacit knowledge.

In the next section, we develop our research questions from reviewing relevant literature. Section three covers the research methodology of this study. The results and discussions of this multi-case study are presented in section four and conclusions are drawn in section five.
Acquiring Intangible Resources through Network Ties

Network Mix at Different Development Stages

Studies have shown that entrepreneurs use different network ties during different stages of the entrepreneurial process (Adler and Kwon 2002; Lechner and Dowling 2003). The networking activities of entrepreneurs can be identified with multiple stages (Butler and Hansen 1991; Hite 2005; Larson and Starr 1993). Butler and Hansen (1991) showed that, during the opportunity identification process, entrepreneurs communicate opportunities through social networks; during the business formation process, the newly developed business-focused networks took the central stage; and during the ongoing business growth stage, entrepreneurs use inter-firm strategic networks to obtain more resources, especially intangible resources. Hite (2005) suggested that resource acquisition through a network depends on the type and evolution of relationally embedded ties. Drakopoulou Dodd, Jack, and Anderson (2006) found that entrepreneurs’ networks change over time according to the needs of entrepreneurs.

A typical typology of network ties distinguishes strong ties from weak ties. The roles of strong and weak ties in providing firm resources differ (Burt 1992; Coleman 1988; Hansen 1999; Granovetter 1973; Uzzi 1997). A number of previous studies have explored the roles of strong ties versus weak ties during entrepreneurial processes (Bruderl and Preisendorfer 1998; Elfring and Hulsink 2003; Jack et al. 2008). For example, Starr and Macmillan (1990) suggested that new ventures should focus on strong ties during the founding and early growth stages.

Jack, Drakopoulou Dodd, and Anderson (2004) proposed that ties are differentiated by dimensions other than intensity and called for a multiple perspective to substitute for the strong versus weak tie dichotomy. This study considers a new typology in discussion of network ties: political ties versus business ties. Network ties can be classified further as business ties (ties with
suppliers, buyers, and competitors) and political ties (ties with officials in government, industrial bureaus, and regulatory organizations). In emerging economies with powerful governments and uncertain institutional environments, political ties have played important roles in supporting entrepreneurial firms (Peng and Luo 2000). Network mix refers to the constitution of networks involving the four types of network ties derived from the two typologies, that is, strong political ties, weak political ties, strong business ties, and weak business ties.

**Acquiring Intangible versus Tangible Resources**

Significant differences exist between tangible and intangible resources (Hall 1992, 1993). Michalisin, Smith, and Kline (1997) proposed that imitability is a major factor that distinguishes intangible from tangible resources, and that a resource-based advantage is only driven by intangible resources. Another difference between the two types of resources is that the use of intangible resources will increase their value, while the use of material resources depreciates their value (Fernández, Montes, and Vázquez 2000). Hall (1992, 1993) proved from two of his empirical studies that intangible resources are more important to firm success than tangible ones, for the top five most important resources listed by CEOs in the United Kingdom were all intangible resources.

While many studies have discussed the process of securing resources in general, very few of them distinguished between acquiring tangible and intangible resources (Michalisin et al. 1997). The important role played by intangible resources and the many peculiar characteristics they have deserve tailored studies on how to obtain intangible resources during the entrepreneurial process.
Acquiring Explicit versus Tacit Knowledge

Knowledge is one important form of intangible resources of a new firm. Multiple dimensions of knowledge have been discussed in previous studies. For example, Koka and Prescott (2002) introduced the three dimensions of information as information volume, information diversity, and information richness. Zander and Kogut (1995) developed five central constructs to describe the multi dimensions of knowledge. These dimensions are codifiability, teachability, complexity, system dependence, and product observability.

However, the dominant dimension for a typology of knowledge is based on its communicability or transferability. Knowledge could be defined as explicit or tacit knowledge using this measurement (Polanyi, 1967). A similar typology (Grant, 1996; Nahapiet and Ghoshal 1998) distinguishes two categories of knowledge as information (or know-what, know-that, declarative knowledge) and know-how (or procedural knowledge). Information is “knowledge which can be transmitted without loss of integrity once the syntactical rules required for deciphering it are known” and know-how (defined by Von Hippel 1988) is “the accumulated practical skill or expertise that allows one to do something smoothly and efficiently” (Kogut and Zander 1992, p. 386).

Strong ties and weak ties are good at transferring different types of knowledge. Entrepreneurs can get innovative information through weak ties, while they mostly get fine-grained information through strong ties (Granovetter 1973; Uzzi 1997). Byosiere, Luethge, Vas, and Salmador (2010) have found that strong ties are essential to tacit knowledge transfer and weak ties are vital to explicit knowledge transfer. Nevertheless, the conclusion might be contingent upon the different stages of new firm development and not be universally applicable.
One objective of this study was to answer the question of how entrepreneurs in an emerging economy acquire intangible resources through different network mixes (for example, strong political ties or weak business ties) during different stages of entrepreneurial processes. It compared the network mixes of new firms at the early start-up, establishment, and growth stages.

The current study also aimed to investigate how entrepreneurs obtain intangible resources through network ties and compare the network mixes for acquiring intangible resources with those for obtaining tangible ones. More specifically, we focused on the acquisition of human capital and knowledge transfer using network mix. Some human resources are considered invisible assets and many “of the invisible assets of the firm are embodied in people” (Itami and Roehl 1987, p. 14). Knowledge transfer “is the process through which one network member is affected by the experience of another” (Inkpen and Tsang 2005, p. 149). This study compared the network mixes used by entrepreneurs to acquire explicit and tacit knowledge for new firms in different development stages.

Methodology

The major purpose of the study was to investigate how entrepreneurs acquire intangible resources through different network mixes. The exploratory character calls for a qualitative approach (Eisenhardt, 1989). To compare and contrast entrepreneurial firms in three development stages, a multiple case study is appropriate (Van de Ven and Poole 2005; Yin 2003).

Researchers have used different standards to define entrepreneurial or new firms (Brush 1995; Covin, Slevin, and Covin 1990; Yli-Renko, Autio, and Sapienza, 2001; Zahra, Ireland, and Hitt 2000). Many have agreed on the definition that a firm in the entrepreneurial process should be eight years old or younger (Li and Zhang 2007; McDougall 1989; Zara 1996; Zhang and Li 2010). Employing this definition, this study chose economy hotel chains that had been in
operation for no more than eight years. By this standard, most of the economy hotel chains in China could be included in the research population.

The stages of firm development have been defined by many studies. Wilken (1979) identified three phases in the establishment of enterprises: the motivation phase, the planning phase, and the establishment phase. Lechner and Dowling (2003) classified firms in the following five stages: fast-growing start-up firm, initial public offering (IPO)-preparation, IPO-due diligence, post-IPO, and established firms. Jack et al. (2008) summarized the three stages used by most life-cycle approach models: pre-start up, establishment, and growth.

Mainly considering the sizes of economy hotel chains combined with their founding time and current competitive strategies, we differentiated entrepreneurial firms in early start-up (with 10 or fewer hotels), establishment (with a double-digit number of hotels), and growth stages (with over 100 hotels). Glaser and Strauss (1967) defined theoretical sampling as “seeking samples of populations, events, and activities guided by the researcher’s emerging theory” (Peng, 1997, p. 392). We sampled five Chinese economy hotel chains in an early start-up stage, five in an establishment stage, and three in a growth stage. To avoid releasing informants’ private information, we identified the five executives of the economy hotel chains in the early start-up stage as S1 through S5, those in the establishment stage as E1-E5, and those in the growth stage as G1-G3.

The major method of data collection was hour long in-depth interviews with entrepreneurs (mostly founders, CEOs, GMs, and VPs who own company shares). The name generator method (Scott, 2000) was used to locate entrepreneurs’ friends and acquaintances who played important roles in the processes of acquiring human capital and knowledge. Information on network tie strength (strong vs. weak) and type (political vs. business) was also collected. The
interview guide was composed of questions on the development of network ties, the processes of acquiring human capital and knowledge, and the importance of each type of ties. All interviews were voice-recorded and transcribed. Two authors coded the transcripts independently and the cross-check showed inter-rater consistency.

**Results and Discussion**

**The Importance of Network Ties in Acquiring Intangible Resources**

A total of 38 network ties of various types were mentioned during the interview process, averaging about three ties per informant. Among the 13 informants, one could not recall any network ties through which to acquire intangible resources; others gave at least one example of using network ties to obtain intangible resources. E2 described the highest number of six network ties through which intangible resources were obtained.

Knowledge and human capital are two specific types of intangible resources discussed in this study. We found that network ties played an essential role in acquiring human capital. Among the 38 network ties mentioned by informants, 21 were used for acquiring human capital. For example, the director of human resources of S2’s hotel chain was hired through a referral. G1 contacted colleagues in his previous company to hire a former customer because he was moved by her sense of responsibility many years ago.

The major reason entrepreneurs hire friends and acquaintances or hire through referrals is that they know each other better. Knowing the ability, attitudes, and moral qualities of the potential employees and the managing style of the employers leads to high levels of trust between them. E1 suggested that resumes are not reliable sources of people’s capability and that hiring through referrals is more effective. About 80 percent of middle or high level managers hired through network ties were retained in the company, but only 20 percent of those employed
through the public recruitment process kept their positions after the probation period. S1, S5, and E4 hired previous subordinates as key assistants because entrepreneurs could instantly assign important jobs to them.

Although other studies showed that hiring through network ties is not uncommon in international hotel chains (Liu, Huang, and Hsu 2010), network tie-related hiring is more important to the population considered in this study. The major reason may be that the headhunter industry is not yet well-developed in China, and most economy hotel chains lack human capital support from their parent companies, which themselves possess only limited talent in hotel chain operation. Well-established databases on available human capital that companies can resort to in the market are yet to be built. Due to these reasons, network ties could be the primary channels for hiring middle and high level managers at this stage. This study also found the practice of combining public recruitment with network-related hiring. Both G2 and E3 verified that people referred by friends and acquaintances must pass all formal screening procedures before being employed.

**From Weak Ties to Strong Ties and No Ties**

A general pattern was found for using entrepreneurs’ network mixes to acquire intangible resources during entrepreneurial processes in this emerging economy. The majority of network ties used by entrepreneurs in the early start-up stage are weak business ties. For example, S3 hired three acquaintances and all of them played important roles in the firm: two are property level general managers and the other takes care of multiple properties in the city where the chain started. S5 hired a previous colleague as the general manager of a large hotel.

This finding is different from previous study results showing that strong ties are more willing to offer help to entrepreneurs at early stages when the risks of failure are high (Bruderl
and Priesendorf 1998). Uzzi (1997) suggested that in early stages, most entrepreneurs get resources through strong ties such as relatives or good friends. The reason for the difference could be that the current study only focused on intangible resources. The passing of information to others does not reduce the welfare of the actors (Fernandez et al. 2000), which makes people more willing to share intangible resources with those linked through weak ties.

In the establishment stage, almost all entrepreneurs relied on strong business ties to obtain intangible resources. Many of the strong ties used in this stage are developed from weak ties in the earlier stage. For example, E1 can discuss any topic on hotel administration in depth with a university researcher who conducted consulting work for his previous company. E1 also learned the whole process of on-line business booking through a supplier of IT technologies to his company. E2 developed a close relationship with the manager of a consulting firm during an earlier fundraising period. Even though the cooperation between them failed, E2 can still obtain answers for all questions on how to raise funds from financial organizations from this tie. Jack et al. (2008) explained that, with the growth of business and an increasing number of network ties, entrepreneurs delegated previous network ties to colleagues for maintenance and only dealt with strong tie-related issues.

In the final growth stage, none of the entrepreneurs took individual ties seriously. They concentrated on creating core competences through employee training, building corporate culture, and improving the efficiency of execution. G1 claimed that his network ties were not important in improving firm performance, and the competitive advantage of the firm was the unique corporate culture. When being charged with an offense against regulations, G2 paid government fines without trying to solve the problem under the table through political ties because he did not
want to lead employees to the wrong direction. G3 pointed out that network ties are irrelevant to the core competences of his company.

Institutional theory held that, in a transitional economy, network ties play a less important role as market regulations and institutions are established. This is consistent with our finding of how entrepreneurs weigh network ties differently in the growth stage versus in previous stages. Another possible reason is that organizational level strategic networks were substituted for the network ties between individuals. Inkpen and Tsang (2005) suggested that, with the development of new firms, the individual level and organizational level social capital are often interrelated. Without asking questions on organizational networks, we cannot judge whether organizational networks are important in the growth stage.

**Political Ties Not Key to Acquiring Human Capital and Knowledge**

Our analysis suggested that the network mixes for acquiring tangible and intangible resources are not identical. In our study, the only informant who did not use network ties to acquire intangible resources did use a strong tie to obtain funding critical to the start-up and survival of his firm. Some informants, such as E1, who used many network ties to obtain intangible resources, did not acquire tangible resources through network ties.

A clear pattern was found in the use of political ties versus business ties. We discovered that political ties are not popular for acquiring human capital and knowledge. Most network ties through which entrepreneurs obtain human capital and knowledge are business ties. Only one entrepreneur learned about the minimum area requirement for a hotel room through a strong political tie. He found that his hotel was in the grey area as regards breaking regulations. This entrepreneur obtained suggestions from the government official and fixed the problem at minimum cost. Tsang (1998) proposed that after receiving support from government officials,
managers often had to pay them back, in particular, by hiring unqualified people recommended by those officials. Nevertheless, no such case was found in our study.

Although using political ties is not common for acquiring these two types of intangible resources, some cases suggested that they are effective in other procedures, such as gaining legitimacy and settling disputes with other parties. For example, when an informant intended to break a lease to reduce losses and was sued by a property owner, she obtained help from a political tie and settled the lawsuit, paying only nominal penalties far lower than the amount required by the original contract.

A related study (Liu et al. 2010) found that political ties also function in the acquisition of tangible resources. In China, government officials control a large proportion of funding and can assign funds to state-owned companies based on rationales other than investment return. When government executes a tight monetary policy, support from strong political ties is very important to entrepreneurs for obtaining loans from state-owned commercial banks. Entrepreneurs have also leased properties of good location through both strong and weak political ties.

**Similar Network Mixes for Acquiring Explicit and Tacit Knowledge**

While previous studies have shown that weak ties are good for innovative information and strong ties for in-depth information, this study showed that the primary factor affecting entrepreneurs’ network mixes in acquiring knowledge was the development stages of the firm. In the early start-up stage, entrepreneurs either did not use network ties or used weak ties; in the establishment stage, they mostly used strong ties; and in the growth stage, they used weak ties (Table 1).
Table 1
Network Mix in Obtaining Knowledge

<table>
<thead>
<tr>
<th>Processes</th>
<th>Explicit Knowledge (Identify Opportunity)/Know-what</th>
<th>Tacit Knowledge/Know-how</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-up</td>
<td>N/A</td>
<td>Weak ties ^a</td>
</tr>
<tr>
<td>Establishment</td>
<td>Strong ties</td>
<td>Strong ties</td>
</tr>
<tr>
<td>Growth</td>
<td>Weak ties</td>
<td>Weak ties</td>
</tr>
</tbody>
</table>

^a: S4 is an exception in this category. He reported all his network ties as strong ones.

None of the entrepreneurs in the early start-up stage used network ties to identify opportunities, because all of them had been working in the economy hotel sector and had found the business opportunities by themselves. These informants obtained tacit knowledge mostly through weak ties. For example, S3 learned about philosophy of product design and other tacit knowledge from two weak business ties.

Entrepreneurs in the establishment stage, such as E2 and E4, obtained both explicit and tacit knowledge through strong business ties. E2 obtained macro-level knowledge of the whole economy hotel industry through a scholar (listed as E2’s strong tie) who was invited to develop strategies for the parent company. The fine-grained knowledge of how entrepreneurial firms can obtain funding was discussed by E2 and her friend, a manager of a consulting firm. E4 identified the optimistic future of economy hotels and product positioning through a strong business tie. They shared knowledge such as general pricing strategy (explicit) and details of product design (tacit).

Weak ties help entrepreneurs in the growth stage to acquire knowledge. G1 entered into the economy hotel sector through an acquaintance who played the role of a broker between G1 and the primary investor. G2 first learned of the potential of economy hotels through a classmate...
working in a regional bank which received many loan applications from economy hotel developers.

The network mix found by this research is in contradiction to the commonly accepted pattern of strong ties being good for tacit knowledge and weak ties for explicit knowledge (Byosiere et al. 2010). The major reason could be that the differences between explicit knowledge and tacit knowledge are subtle; thus, the network mix was dominated by the firm’s development cycle. Another possible reason for firms in the establishment stage obtaining explicit knowledge through strong ties could be due to the bias incurred by the name generator method. Using this method, informants tended to recall more strong ties than weak ties. Entrepreneurs in the growth stage obtained tacit knowledge through weak ties instead of strong ties, possibly because they separated business relationships from personal relationships and used different standards to define the strengths of those two types of ties. For instance, G2 maintained frequent contacts with a supplier and was able to obtain in-depth knowledge and timely feedback from him, but he did not take the relationship as emotionally committed and defined it as a weak tie.

A by-product of analyzing explicit/tacit knowledge transfer is that entrepreneurs who combined other methods with networking in obtaining knowledge in different stages. In the early start-up stage, entrepreneurs learned through books, websites, and “shopping the competitors” to gain explicit knowledge that is publicly available. In the establishment stage, they participated in conferences or hired competitors’ employees to obtain both explicit and tacit knowledge. In the growth stage, entrepreneurs exchanged fine-grained knowledge by organizing structured face-to-face meetings with competitors. For instance, G1 and his VPs visited G3’s company and formed panel style discussions with top executives there. G1 also visited another well-known economy
hotel chain to learn from their operational experiences. G2 initiated an informal meeting with top executives of other large economy hotel chains.

**Conclusion**

Results of this study supported the application of social network theory to the entrepreneur field. Through network ties, entrepreneurs can gain intangible resources that are otherwise either unavailable or marked by higher prices in the market. Entrepreneurs use different network mixes during different stages of firm development. A wealth of empirical evidence was recorded to help improve our understanding of the roles of entrepreneurs’ network ties in the specific processes of acquiring human capital and knowledge. The distinction between network mixes used for acquiring tangible and intangible resources added to the enrichment.

In addition to the strong versus weak tie distinction, we added a new dimension for describing network ties: political versus business ties. The role of political ties has not been thoroughly discussed in the literature. In transitional economies like China, the role of political ties is particularly relevant and could be a good topic for future study. Furthermore, we realized that political and business ties do not form a complete typology because they do not exhaust all possible network ties. Entrepreneurs’ network ties with other parties, such as relatives, classmates, and hometown fellows, cannot be put into either category. Some informants in this study noted that they especially benefited from network ties with academic researchers, but a full discussion of such tie is unwarranted since we did not ask specific questions on this type of network tie. Exploring the roles of researchers as network actors in knowledge transfer in the hotel industry may also generate promising research findings.

Using retrospective design to probe process-related research questions is feasible but flawed. The different network mixes used by entrepreneurs in different stages could be due to the
characteristics of individuals, not the firm development process. Using a longitudinal design to follow up the same group of informants over time can remedy such a methodological defect and lead to more convincing results.

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References


Abstract

This research paper aims to investigate how innovation emerges as a result of interactions among firms in a collaborative network of micro, small and medium enterprises (SME) in São Paulo’s furniture sector. Innovation in SMEs’ collaborative networks in emerging economies has been influenced by various entities, especially the government, and the complexity of this phenomenon cannot be sufficiently explained by the theoretical perspectives in the literature. In order to generate a substantive theory that explains it, a case study has been conducted using Grounded Theory. The analysis is based on about 1068 minutes of interview material together with secondary source material relating to the organizations interviewed. The findings contribute to our understanding of the impact of context on innovation, and shows how group’s experiences and the need for knowledge have influenced innovative relationships.

Keywords: collaborative network, small and medium enterprises, innovation, knowledge, qualitative research.

1 Introduction

Firms’ innovation capability has become a critical factor for productivity and competitiveness. Advances in information technology, communication and globalization have increased competition and simultaneously created opportunities for co-located businesses to work together to form innovative clusters for technological upgrading and diversification (Carayannis and Wang, 2006; Porter, 1985; OECD, 1999). Here, we focus on how an agglomeration of small and medium enterprises located in an emerging economy can collaborate effectively to increase their ability to innovate.

Research studies of small business have often been based on theoretical perspectives developed for larger companies, but this extrapolation should be treated with caution, as a small business is not a big company in reduced scale (Welsh and White, 1998, Gibb 2000). Indeed, the recent literature review by Tan, Fischer, Mitchell and Pan (2009) suggests that little research effort has been devoted to SME theory building from a small businesses setting, and that even less theory building has been done in the case SMEs’ external relationships in the network context (Street and Cameron 2007). Rather, studies have tended to focus on

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individual, organizational and environmental characteristics which affect the formalization of relationships, and their subsequent performance, organizational development and competitive advantage rather than focus on the evolution of these relationships, and their impact on future relations. The contribution of our research is to generate a substantive theory\textsuperscript{2} to help us understand and explain how innovation emerges and to explore which factors contribute or inhibit this process in an SME collaborative network.

To focus our research, we sought a network that had an established record of acting collaboratively and which has been generating concrete results from this collaboration. With that in mind we approached the Forum for Innovation\textsuperscript{3} and the Brazilian Service of Support for Micro and Small Enterprises (SEBRAE)\textsuperscript{4}. The Movelaria Paulista was nominated by SEBRAE as an example of Local Productive Arrangement (LPA), whose behaviour; practice and work represent an example of good practice and provide a valuable reference to other associations. The Movelaria Paulista currently consists of 57 companies that are part of a complex of more than 3,000 furniture companies in the metropolitan region of São Paulo, accounting for more than 15 thousand formal jobs. During the period of 2004-2007, this group was able to raise their revenue by 31.4\% and increase their employment by 28.7\%.

Innovation in SME’s collaborative networks in emerging economies is influenced by its historical and cultural context, by different entities, especially the government, and becoming a complex phenomenon that cannot be sufficiently explained by one theoretical perspective in the literature. Therefore, in order to investigate the collaborative process at Movelaria Paulista as an intersubjective experience of social actors, without any pre-conceived theoretical approach, it was decided to use the Grounded Theory as research methodology. This leads to a substantive theory that explains how the practice of co-operation was established in Movelaria Paulista and how it has evolved in the group. At the same time, it highlights the positive impact on exploitative (marketing) innovations that had already carried out, and provide

\textsuperscript{2} Substantive theory is specific to a particular group or situation and it is not intended to generalize beyond their substantive area. It explains a “reality”, made real by the subjects, not an absolute truth, devoid of value. (Banderia-de-Mello, Cunha, 2006)

\textsuperscript{3} The Forum for Innovation was created on May/2000 from the interest of EAESP and private organizations to work jointly on the theme Innovation. Its mission is to stimulate and facilitate research, generation, dissemination and application of knowledge about innovative organizations.

\textsuperscript{4} SEBRAE was created in 1972 as a private non-profit organization to encourage entrepreneurship and sustainable development of Brazilian micro and small firms. SEBRAE has 27 offices, 788 service points, 4.5 thousand employees and 12 thousand consultants which allow the organisation to develop regionally specific interventions while at the same time gathering relevant knowledge and data across the country.
explanations to the difficulties have found in implementing exploratory innovations. From a practical standpoint, the theory helps entrepreneurs and other agents (support agencies and trade unions) to understand the how Movelaria Paulista actually works and to support their decision making process. For the entrepreneurs who are members of Movelaria Paulista, the theory can be used to forecast scenarios for Movelaria’s evolution, so actions can be taken to minimize risk and accelerate results. Support agencies, such as SEBRAE, can use the Movelaria’s collaborative dynamics as a base to expand their understanding of SME networks dynamics and evolution, providing resource to analyse their role in this context and with other networks, allowing mechanisms to improve their contribution.

The article begins with the presentation of the research design and its methodological aspects, then the field research and theoretical elements of the Movelaria Paulista’s collaboration dynamics are exposed. The propositions suggested are then evaluated through a comparison with the current theoretical mainstream. Finally, closing this article the concluding remarks of this study, future studies propositions and practical application in small business networks are explored.

2 Research Design and Methodology

To address the research question: “How do innovations arise from collaborative network relationships between organizations?”, and the desire to understand the answer within a social context we sought to develop an appropriate research project. To support this decision, Guba and Lincoln (1982) emphasize that it is essential to position the researchers in their ontological and epistemological beliefs, since these beliefs influence how the world is viewed and guide researchers’ actions. Burrel and Morgan (1979) classified these positions on two axes, and the nature of science (objective-subjective) and the nature of society (order-conflict), proposing four broad paradigms: functionalist, interpretive, radical humanist and radical structuralism. Lewis and Grimes (1999) explain the axes of the division of the paradigms of Burrel and Morgan:

[...] Objectivity presumes an external reality of deterministic and predictable relationships, whereas subjectivity presumes contextually bound and fluid social constructions. Regulation assumes harmonious and orderly social relations, whereas radical change assumes conflict and power (Lewis and Grimes, 1999).

Here we adopt the interpretativism lens, subjective as nature of science and a social context that seeks order. although we are more aligned to the Boeira and Vieira (2006) proposal that encourages researchers to
reflect on the proximity of the Complex Thought from Edgar Morin (2006), which recognizes that different paradigms can coexist and “we must regroup the knowledge to seek the understanding of the universe, returning a knowledge that is asleep, regrouping unity and diversity”. In Morin’s opinion researchers should include the specialized competencies in a natural context, as a whole, he proposes the knowledge hierarchy and organization in the contemporary thoughts: “We must contextualize each event, because things do not happen separately ...”. He points out the importance of historical context in the citizens training and the challenge of complexity is exactly the understanding of “our community destinies”.

The complex context and reality of this study suggest the need for a flexible approach which enables the evidence to shape our conceptualization of innovations in collaborative network of small enterprises. According to Goulding (2002), Grounded Theory is essentially a qualitative research method for collecting and analyzing data and it is independent of the underlying epistemology. This means that Grounded Theory is as Glaser describes a "paradigmatically neutral" (URQUHART, 2001), which makes possible an investigation using multiple paradigms (BRYANT, CHARMAZ, 2005), therefore suitable for the purpose of this research.

2.1 Methodology

The researchers ontological and epistemological positioning and the research question led to chose Grounded Theory approach to guide this research. There are several definitions of Grounded Theory, the first made by the creators, Glaser and Strauss (1967), defining it as “the discovery of theory from data – systematically obtained and analyzed in social research”. A more detailed definition is as follows:

The methodological thrust of grounded theory is toward the development of theory, without any particular commitment to specific kinds of data, lines of research, or theoretical interests ... Rather it is a style of doing qualitative analysis that includes a number of distinct features ... and the use of a coding paradigm to ensure conceptual development and density (STRAUSS, 1987).

The two key points related to Grounded Theory are: (a) it does not use a predefined theoretical framework; and, (b) analysis and conceptualization use the core process of joint data collection and constant comparison. The first point relates to the importance of the researcher not starting from a pre-defined theoretical framework. This is not, in fact, an accurate representation of the position of Glaser and Strauss
which is more subtle and deserves a clarification. The aim is to ensure that the researcher uses a more inductive than deductive approach, and “listens” to the data instead of imposing preconceived ideas. The other key point concerns the circularity of data comparison that is the center of Grounded Theory as a method, in simplified explanation is the process of comparing instances have already labeled to a particular category with other slices of data, whether these categories are adjustable and feasible. If they are, the slices overlap and we have what Strauss (1987) and Glaser (1992) called the “theoretical saturation”.

It is important to mention that Glaser and Strauss disagreed on two key issues. First, Strauss and Corbin (1998) suggested breaking the coding process into four prescriptive stages (open, axial, selective, and ‘coding for process’). Glaser uses only three: open, selective and theoretical coding with incremental levels of abstraction. Secondly, Glaser opposed the use of coding paradigms and the ‘conditional matrix’ that are designed to provide tools to facilitate the process of conceptualization. Glaser noted that it ‘forces’ the coding by using a model and/or establishing conditions which is not Grounded Theory, but a conceptual description, which ignores the emergent nature of this theory (GLASER, 1992). Moreover, the coding paradigm used by Corbin and Strauss (2008), suggests that the researcher examines the context, conditions, action/interactional strategies, intervening conditions and consequences for the purposes of creating categories and their relationships.

According to Urquhart (2001) it is also important to consider a couple of other issues: first, the paradigm of encryption provides only an overview of a particular phenomenon. In contrast, Glaser suggests 18 families of coding, covering the ideas and elements as size, purpose and mutual reciprocity, social control, recruitment and isolation, and many other ideas for categories and relationships. Secondly, there is the insistence of using the axial coding stage, where categories and relationships are considered simultaneously using the paradigm of coding may cause difficulty for some researchers. This work makes use of Corbin and Strauss (2008) approach to analyze data, believing that it provides clear guidance to allow more abstract theorizing and avoiding the potential pitfalls and complexities of Glaser’s axial coding.
2.2 Research Design

The research design for this study comprises two main elements: interacting with the study object and subsequent desk based research on the circularity of data comparison. ATLAS/ti will be used as a tool to support and facilitate the documentation of all research stages required by Grounded Theory (figure 2). Data were collected from February to August 2009 and involved: 11 interviews (2 SEBRAE’s managers; 2 trade unions’ representative; 1 manager from Agency for Economic Development of Greater ABC; and 6 entrepreneurs) total 1068 minutes recorded and transcribed; 2 factories visit and participation in 4 meetings as an observer. The research activities at the Movelaria’s network were designed to allow the use of a collaborative approach (Shani, et al, 2008) aiming to mitigate the impact of an external observer. The researchers used the Atlas/Ti as a tool to support the documentation and circularity of collection and analysis process required by the method.

The primary data were analysed using the procedures and techniques suggested by Corbin and Strauss (2008) for coding and increasing the theoretical awareness. For the first round of open coding 6 interviews were chosen, totalling 630 minutes: a manager SEBRAE (more time on the project), a union representative, four businessmen (the interviewer’s perception of being those more comprehensive and revealing). During open coding process highlighted 553 quotations, 164 memos and 74 codes. Data analysis is one of the key stages in Grounded Theory and is based on the method of constant comparison, which aims at the discovery of properties and dimensions that characterize the theoretical categories. The addition of dimensions to the categories allows new data to be compared to existing ones, which increases the validity and the empirical foundation of the theoretical elements (Bandeira-de-Mello and Cunha 2006). After identification of possible conceptual categories by open coding, axial coding was used to examine the relationships between categories and subcategories to explore causes and effects, intervening conditions and action strategies that were presented in propositions. This led to the identification of 20 abstract concepts. Finally, selective coding refined and integrated all the results, resulting in 8 theoretical constructs and the central category of substantive theory: the dynamics of collaboration in the Movelaria Paulista.
The remaining (5) interviews were used for the validation phase of the substantive theory. In order to assess the quality of the substantive theory, we present in table 1 criteria for Assessment Quality proposed by Hutchinson (1988) adapted from Glaser and Strauss (1967) where the theory should: Fit, Work, be Relevant, Modifiable, have Density and Integration.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Movelia´s Collaboration Dynamics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fit</strong></td>
<td>Data fall into place naturally; the researcher does not force them into codes. Readers of quality theories can see and understand this fit.</td>
<td>The theory was submitted to a peer review process and they named the central category.</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td>Theory explains major behavioral and interactional variations in the data. It can predict what will happen under certain conditions and with given variables.</td>
<td>It explains why Movelia is a reference for SEBRAE as a collaborative network and allows the forecast of some future scenarios.</td>
</tr>
<tr>
<td><strong>Relevance</strong></td>
<td>It is related to the core variable and its ability to explain the ongoing social process in the action scene.</td>
<td>The theory was submitted to the Movelia’s entrepreneurs and they see their reality reflected on it.</td>
</tr>
<tr>
<td><strong>Modifiable</strong></td>
<td>Must be flexible, allowing new cases enrich it by contributing with introduction of new properties and categories.</td>
<td>The next phase of this research is to conduct multiple case studies in order to increase this theory explicative power.</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>Theory is dense when it possesses a few key theoretical constructs and substantial number of properties and categories.</td>
<td>During the process were identified: 553 quotations, 164 memos and 74 codes. Then 20 general concepts were abstracted and narrowed to 8 theoretical constructs. Getting the following relationship: 8/20/74/164/553.</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Ensure that propositions are systematically related and fit into a tight theoretical framework</td>
<td>The propositions were integrated into the Movelia’s storyline and all related to the central proposition. Second set of interviews ratified the substantive theory.</td>
</tr>
</tbody>
</table>

Table 1 - Assessment Substantive Theory Quality at Movelia Paulista
Source: adapted by authors, based on Hutchinson (1988) and Glaser and Strauss (1967)

In next section we describe our case study and what we discover during our analysis process and the propositions are presented alongside Movelia´s storyline.

3 **Field Research – Movelia Paulista**

The Movelia’s formation process began in 2004, in a context of increasing market competitiveness in São Paulo’s furniture sector, which was facing strong competition from Southern industries. During interviews, the entrepreneurs explained that Movelia was constituted in an increasing competitive market context, outdated technology and lack of market information. These conditions increased their desire to constitute a differentiated group. The respondents addressed not only the time of this constitution, but also
rescued the story of their own businesses, enriching the interviews and contextualizing the Movelaria’s importance in their organizational lives.

To present the results of a study using Grounded Theory without going into technical details of how the substantive theory was constructed, which may seem at first glance like a complex puzzle, and at same time to be able to highlight the process, we follow the recommendation of Goulding (1999): “the paper or thesis should be written in a way that allows the reader to identify key stages in the research and highlight conceptual development ... they demonstrate the process of telling the story of building theory using this method.”. In the next section we present the synthesis of what the Movelaria Paulista’s case revealed, followed by the story of how its collaboration dynamics was built.

3.1 What was revealed

The research revealed a group of companies with a strong desire to make a difference for its members and the society around them. Three aspects dominated: the role of Movelaria Paulista (MP) in the respondents’ organization story; the existence of common values; and, demands for change, derived from the difficulties faced by some initiatives (projects).

The MP’s formation stage was marked by a desire to create a centre for information exchange and share best practices, leading to projects that brought tangible results for the group and reinforcing the importance of the association. However, over time more complex projects appeared, the market created new demands and the interviewees cited managerial or technical issues to explain their poor performance, below expectations, generating in the group the need to resolve them.

The concept of collaboration dynamics represents the inter-relationship that occurs among MP’s members, from the individual or collective’s goals a set of experiences are accessed and have promoted actions. The lack of experience in dealing with some subjects suggests that new knowledge must be acquired and what ways to address and forward the issues should be discussed in the group, in order to promote a common understanding and directing.

During the formation stage, Behavioural trainings were provided by SEBRAE, which were tailored to MP (focus on associativism and entrepreneurship). They worked as a knowledge source required aligning
the different experiences and values which enabled the MP constitution. In the consolidation period, the group have faced two challenges: to expand its knowledge and experiences base and to hold common values and directions, by creating mechanisms that encourage the issues’ discussion and addressing them as soon as they arise (see Figure 1).

![Diagram](image)

Figure 1 – General View of Substantive Theory

3.2 MP Storyline – A Dynamic of Collaboration Emerges

The creation of an LPA among furniture companies was originally proposed by SEBRAE and trade unions and the idea was well accepted. The entrepreneurs’ previous experiences of difficulties to access and lack of information, isolation, loss of market share and unsuccessful initiatives in forming associations strengthened their desire to work in collaboration. The first action was the Behavioural training provided by SEBRAE, which was considered by respondents as the landmark that has provided the knowledge needed to enable the group’s wish: build a differentiated LPA. It served as a catalyst that changed the attitude and the way of members’ behave, as in interviewee testimonial:

"First, we did the behavioural ... was the most important thing! The furniture business was not mentioned, it’s spoken only about behaviour ... I changed my vision, I do not see other factories as adversaries, much less as enemies, I see in them possible partners (E6:145)"

In this context, they had the desire and the experience; they knew what not wanted and what had gone wrong. The training provided the knowledge required to underpin the development of the MP. It helped entrepreneurs to start a set of initiatives, which were conducted in order to build a differentiated LPA. This suggests our initial proposition (P1):
**Prop 1: The interrelationship of experiences and knowledge associated with common values/desires led to the project’s realization.**

The MP’s story can be divided in two periods: the first covers its formation in 2004 until 2008 when the second round of investment was approved, and the second period from this approval until nowadays. The first period, I called the formation, where the group’s desire was to constitute a LPA. The initiatives or group’s projects were aimed at establishing sharing and knowledge exchange practices through members’ interaction (see P2 and P5 in table 2). The statements collected confirm the quality difference in learning process between participating in isolation and being in group, when insights and learning are shared and exchanged among them during the event. The group used the Internet to create a user group to exchange ideas, information and mutual support, sharing the difficulties and needs of raw materials, machinery, services and even in the execution of large orders. One interviewee said:

“... or appears someone telling you: I have a problem here I do not know how to manage this product can anyone help me? Soon someone says: you should do this and that ... so there is a constant exchange of information (E5:298)”

Thus, relationships were developed and solidified. As the mutual trust increased the greater the relationships’ relevance for the group, becoming a valuable asset. The isolation and lack of information now were no longer part of the MP’s daily business. This supports our second proposition and first hypothesis:

**Prop 2: MP strengthens its ties when it experiences the success of projects.**

**Hyp 1: Successful experiences increase mutual trust and the relationships’ value for the group, becoming a valuable asset**

The trade union’s role in this period was to mediate and introduce the entrepreneurs, SEBRAE acted as training and consulting provider, serving as the catalyst in this initial stage. The training was conducted during 2004-2006 in three different cycles, each group became known as G1, G2 and G3, respectively. During the training some initiatives emerged as families’ parties or group met to talk about their companies, this period strengthened the groups’ acquaintance, interaction and experiences exchange. After the G1 was trained, they had worked on MP’s mission, vision and values definitions, while G2 and G3 were being trained, as they completed the behavioural training these definitions were been validated and refined by all of them. In these definitions, the terms ‘sharing’ and ‘contribute to a better society’ are present, providing
evidences supporting the enthusiasm for the projects: LeoEduca and Residues (P14 and P4 in table 2). The institutions’ role is recognized when it adds value, such as the behavioural training provided by SEBRAE, in other situations their performance is questionable, as the trade unions management capability. See the following statement:

“SEBRAE has enormous merit ... brought money, brought the intention, and brought a lot of things right? But they do not manage by themselves; they need management and validation ok? The trade union has no such competence, they need us ... (E6:172)”

This suggests us to the following proposition:

**Prop 3: The institutions aggregate value when provide knowledge and gather experiences to accelerate the projects’ execution.**

The second period I called consolidation, since the group’s desire was to strengthen the LPA, with initiatives (see in table 2) for the creation and dissemination of an identity (P1), technical projects to improve competitiveness (P3, P9) or social actions aimed to improve São Paulo’s furniture sector (P6, P10, P12, P13). In a natural process of evolution, some projects are more complex, requiring new knowledge and generating situations where the past experiences do not contribute to address them efficiently. Moreover, the current macroeconomic context has required full attention of small businessman, who demonstrates a high dependence on market conditions. The story of these furniture companies is full of ups and downs, which had required entrepreneurs’ versatility and adaptability to deal with market volatilities. See what was said by one of entrepreneurs:

“... in last September (2008) the crisis hit me, I sent e-mail asking for help ... I do not know, I remember that I did with Jean, the “Livraria da Vila” bookshop, it gave me work for a month and then I work jointly in another big ...it saved me... (E6:178)’

If the market goes into recession, MP’s member focus is on its own business; its attention turns 100% to the company’s issues. Then there is a dilemma: focus on own business vs. MP, delegate management vs. Institutions’ lack of managerial skills. The entrepreneurs expressed their anxieties related to the delay of certain projects (marked with $ in table 2), clearly stated in the following passages:

“... we as a businessman, we have to bring results and promote and get members interested in participate in that. In the other hand, for you to participate you have to do this, this and this ... it is not that we will get you thing you have to train yourself and you, as interested one have to do this, this and that... (E2:251)”
“... you know things do not happen and so ... I realize that people is sick of this thing, so you know ... participating in the meeting and there are a lot of reunions ... actually, things are not happening! (E6:178)”

I named their concerns as **issues** which were grouped by nature into three categories: technical, managerial and institutional. The technical issues are associated with the need to increase product quality and production process’s efficiency, increasing the MP’s competitiveness as a whole. The issues of a managerial nature are linked to ways of maintaining group’s involvement and their cohesion. Concerning to the institution’s issues, they are related to set required skills, boundaries, roles and responsibilities.

The way issues are conducted by MP is directly related to the different entrepreneur profiles existing within the group. During the analysis of field material I could identify three types of entrepreneurs: the conservative, the visionary and the articulator, and some of them have a mix of these profiles. The conservative profile results from trauma that originates from past experiences of isolation and lack of information. These entrepreneurs tend to value more the results obtained so far, showing an accentuated concern with the lack of results and performance of ongoing projects. Their biggest fear is the group demobilization, due to the lack of results or institutions’ slowness. The visionary is one step ahead of everyone in the group, not always able to express adequately their ideas, which sometimes creates misunderstandings. The articulator profile comprises a group of entrepreneurs with clear concerns about political matters. This profile adds the defence of MP’s issues along class entities and simultaneously promotes their integration and besides has access to privileged information. However, they have the need to be close to power, creating difficulties in promoting greater participation and rotation in coordination roles and have difficulty to impose limits and charge the institutions responsibilities. Based on those we suggest more three propositions:

**Prop 4:** The ties among MP’s members are strengthened when the company’s issues (difficulties) are solved by the group.

**Prop 5:** The absence of previous experiences and relationships that provide knowledge to address issues generate project delays.

**Prop 6:** The communication among entrepreneurs to reach the single desire (value) as a way to address issues, is the key to leverage the projects.
The inclusion of new members is a recurring theme because it is a demand that frequently reaches SEBRAE and trade unions. The interviewed entrepreneurs are unanimous in stating that the preparation (provide behavioural training) and/or their capability enhancement are the trade unions’ responsibility. The conservatives are against the newcomers, because they may weaken the ties, as they would require a new cycle of trust building and would affect current relationships. The visionary group believes that MP must be open to newcomers by the establishment of parameters that allow MP to be dynamic, flexible and agile, being independent of any institution. The articulators try to prevent parties’ exaltation, recognizing the trade unions and SEBRAE’s limitations in preparing a new group, the G4, but at the same time they have not been able to come up with a solution.

Another incident example occurred in the Residues Project, which was approved by the municipalities and got the commitment of collectors’ association, educational institutions and research centres, demanding a manager from MP to carry it out. The group had decided in hiring a full-time professional and whom MP shall be responsible for supervising. The hiring process was delegated to SEBRAE and trade unions, which stopped in these institutions’ bureaucracy and delays. Deepening in this theme during the interviews, the conservatives do not make their points strongly in order to not expose the relationships, the visionaries had difficulty in articulating their ideas and get listeners buy-in and the articulators are too entangled with institutions to glimpse an alternative solution.

During the first period MP had a single and explicit wish, a set of acquired experiences and the knowledge supplied by SEBRAE were sufficient to achieve their goal: the LPA formation. The tripod knowledge, experience and values were present. The current period, consolidation, has demanded new knowledge, the required experiences do not exist in the group and some situations have led a lack of consensus. It allows developing the following hypothesis:

**Hyp 2: MP’s strengths is based on respecting its members’ experiences, searching new knowledge and maintaining common values, which are reflected in their projects and actions**

If this hypothesis proves to be valid, the MP needs to invest in its tripod to address its issues: expanding the sources of knowledge, trying new forms of management (broaden experiences) and keeping a single and cohesive group’s desire (values). In order to make it happen, it is essential to create a process to
discuss and address their issues. Indeed, a process that is conducive to learning, allows experimenting different alternatives and broader sources of knowledge; building new experiences and identifying those that fit better, which bring satisfaction and performance. For then, to reach a third period, I would call it organic growth, in which the group has learned to address their issues, incorporating experience, seek new knowledge and develop their capabilities, keeping common values and growing in a sustainable way.

<table>
<thead>
<tr>
<th>ID</th>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>SEAL (P); (I)</td>
<td>Assess the furniture’s members and provide a seal to the ones with quality standard for its products, act ethically and are socially responsible;</td>
</tr>
<tr>
<td>P2</td>
<td>Visits (O); ($); (I)</td>
<td>Monthly a visit is made to one of the companies in the MP, the processes are presented and what can be improved in the presented process and in the factory are discussed. And besides, the best practices are shared with the group and can be incorporated by visitors;</td>
</tr>
<tr>
<td>P3</td>
<td>Product Engineering (P); ($); (I)</td>
<td>Standardize furniture specifications and planning of their parties, avoiding rework, and speeding up the production process;</td>
</tr>
<tr>
<td>P4</td>
<td>Residues (W); (I); (S); (L); ($)</td>
<td>Collect the carpentry’s residues in the metropolitan area make them available to the scavengers’ community, in order to separate and commercialize the residues. The revenue is donated to this community and the furniture makers do not have to pay any fee to have their waste collected. This project has already the approval and involvement of various stakeholders (municipalities, FIESP, SEBRAE and Universities),</td>
</tr>
<tr>
<td>P5</td>
<td>Events (benchmarking) (O); (I)</td>
<td>Participate as a group in events, fairs and visiting other furniture’s poles (national and international). A committee is created and what was learnt and observed is debated;</td>
</tr>
<tr>
<td>P6</td>
<td>Service Centre (W); (I); (S); (S)</td>
<td>Create a centre that would benefit the furniture industry in São Paulo’s metropolitan area from trading and negotiating in scale, sharing the use of machineries and being a centre of information and competencies (design, technology, etc.)</td>
</tr>
<tr>
<td>P7</td>
<td>PROCUREMENT II (W); (I); ($)</td>
<td>Create a procurement process that enables advantages of scale negotiating, promoting benefits to the MP’s companies. This is their second attempt.</td>
</tr>
<tr>
<td>P8</td>
<td>Virtual Shop (O); (I)</td>
<td>Sell through Internet unique furniture, made with wood leftover. There has not been sales in scale yet;</td>
</tr>
<tr>
<td>P9</td>
<td>MPDesign (O); (I)</td>
<td>Joint to the University (School of Fine Arts) project, where the students can experience the production process and build their design projects and makes it possible for the entrepreneurs have contacted with the design trends.</td>
</tr>
<tr>
<td>P10</td>
<td>PopHome (P); ($); (S)</td>
<td>Joint SECOVI (real estate trade union) to include in the financing of federal project to build popular housing (to low income class), specially designed furniture to fit in the property (houses are too small, no industrialized standard furniture fit). Ensuring that furniture’s production must be kept in the state where the houses will be built;</td>
</tr>
<tr>
<td>P11</td>
<td>Forum (O); (S)</td>
<td>Event where a topic of interest is presented to the industry. It has several guests such as suppliers, other furniture factories (even non-affiliated to the trade union), educational institutions, entities etc. It is a space for exchange experiences, make contacts and networking. Currently the forum is sponsored by the suppliers (painting, wood, machinery etc);</td>
</tr>
<tr>
<td>P12</td>
<td>Technical Fórum (O); (S)</td>
<td>Informational forum for companies in the furniture sector. Aims to bring information about some current issue, in order to strengthen and mobilize the sector (by training and knowledge);</td>
</tr>
<tr>
<td>P13</td>
<td>Revitalization (O); (L)</td>
<td>Every year the MP will support a social entity, in order to revitalize their furniture. It will be alternating between institutions for the elderly in a year, with an orphanage in the following year;</td>
</tr>
<tr>
<td>P14</td>
<td>LeoEduca (O); (L)</td>
<td>Project led by Leo Institute (NGO), which prepare labour force to the furniture sector. The MP works in this project, employing young apprentices and developing the content taught by Leo in partnership with SENAI;</td>
</tr>
<tr>
<td>P15</td>
<td>PRE-SAL (W); ($); (S)</td>
<td>Seek business from large federal projects that are happening in the state, ensuring that Sao Paulo’s furniture sector occupies his space, rather than losing it to other regions’ furniture industries;</td>
</tr>
</tbody>
</table>

Legend: in (P)rogress; O(perational); (W)aiting / ($) generate direct financial gains / (I)ntra MP; (S)ector; socia(L)

Table 2 – List of Movelaria Paulista’s Projects
4 Substantive Theory and current Theoretical Mainstream

The analysis of MP’s collaboration dynamics theory, by promoting a reencounter with current theoretical mainstream, leads us to the studies of: innovation, resource-based view (RBV), collaborative networks and economic sociology. When the MP’s initiatives are analyzed taking the concept of innovation\(^5\) stated by OECD (2005) and have their nature assessed based on Benner and Tushman’s (2003) classification, exploratory (new) or exploited (improvement). We find that the ones in MP are mostly exploitation and little has been done in terms exploration (see table 2). This study contributes to this perspective, adding value through their formation history and how this network has addressed their issues to facilitate innovations (projects). This understanding enables MP to take action in order to increase its capability to establish new relationships, identify opportunities and take advantage of them, considered essential to foster innovation (Tidd, Bessant and Pavitt, 2005).

According to RBV, a superior performance to be sustainable requires that company has valuable resources, difficult to copy, rare and difficult to substitute (Barney, 1991). The MP has as valuable resource their relationships and experiences, which innovations can be seen as the product of relational view of dynamic capability. The dynamic capabilities include the abilities and competences of organization purposefully create, extend or modify its resource base. The MP has been using their social networks, searching for complementary capabilities to increase and expand its base of resources, by making use of the relational view to be more competitive and innovative (Teece, 2007; HELFAT et al, 2007; Teece, Pisano and Shuen, 1997).

The network theory explains the MP’s initial formation process where the interlacing of social initiatives was articulated around common purpose, enabling the MP. The collaborative networks are based on informal movements that are self-working towards a common goal (Cowan, Jonard and Zimmermann, 2007; Inpken and Tsang, 2005; Gulati, Nohria and Zaheer, 2000). It is relevant to remember that the networks are linked to social capital, which has as a central proposition that network relationships are a source of valuable resources for the individual and the organization. As confidence grows, it will also

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\(^5\) “... the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations”
compose and improve social capital, one of its benefits is the access to the information and to the preferential flow of knowledge between them. Inpken and Tsang (2005) investigated how the knowledge transfer occurs in different types of network and observed that three dimensions of social capital directly affects this transfer among its members: Structural, reinforcing network links, configuration and stability; Cognitive, by establishing common goals and building a shared culture; and Relational, strengthening the commitment and trust among members. Some researchers argue that this continuous process of construction should be adjusted to the organization’s strategy, which is best conducted in an environment where there are diversities, is more organic and less formal (Hatchuel, Lemasson and Weil, 2006; Farjoun, 2002; Courtright, Fairhurst and Rogers, 1995; Weick, 1995). In the current market context, organizations are increasingly seeking for strategic partnerships, fostered by complex internal and external networks, in order to produce innovations and generate value for their members. Indeed, the goal is to have a social capital to produce knowledge and actions (Chesbrough, Vanhaverbeke and West, 2006; Singh and Mitchell, 2005; Gulati, Nohria and Zaheer, 2000; Nonaka and Takeuchi, 2004), which is exactly what MP have been searching for. In addition this substantive theory contributes to this field, providing an example of how a network of small businesses was formed and explaining how their relationships have been developing and the challenges that have arisen along its trajectory.

Jones, Herterly and Borgatti (1997) integrated Network Theory to Transaction Costs Theory; they explored the relevance of trust and cooperation in relationships, plus the three exchange conditions proposed by Williamson (1985), in Transaction Costs Economics: uncertainty, asset specificity and frequency. According to them the uncertain environment requires adjustments to what is considered the central problem of economic organization: market dependence, which is experienced by MP. The trust and cooperation promotes a more efficient exchange and sharing of assets, processes and knowledge, which are unique and developed by participants. The customization combined with uncertainty requires guarantees of safeguards that reduce the uncertainties of behavioural environment, which can range from honest disagreements to opportunistic attitudes. The frequency is considered important for three reasons: first, it facilitates the transfer of tacit knowledge; allows immersion relational and structural foundations; and, provides social
mechanisms of adaptation, coordination and safeguards work efficiently. This theoretical model, which probably explains MP’s fears of losing what they have conquered through their relationships, but it, provides no alternatives to understand the current discomforts and how to overcome them.

MP’s base of knowledge and experiences seem to have reached a plateau and thus begin a level of stagnation, at this point economic sociology theory can help us to combine and expand the substantive theory. According to Granovetter (2005), the basic principles that guide economic results for social networking are: network’s norms and density, which includes shared ideas about conduct and accepted behaviours; the strength of weak ties leads to knowledge expansion; relevance of structural holes, what matters is not the quality of ties but what kind of knowledge is connected; and, the social embeddedness, where economic and non-economic activities are inter-mixed, and economic activities will not affect costs and techniques available for their implementation. At the moment you accept to put management science within the economic thought, economic sociology is very close to the organizational action science as proposed by Hatchuel (2000). Hence it allows the reflection on collective action, contributing to the understanding of MP and suggesting new actions that increase the weak ties and ways to address the structural holes, as ways to broaden the base of knowledge and experience to address their issues internal.

<table>
<thead>
<tr>
<th>Theoretical Mainstream</th>
<th>Cental Concept</th>
<th>Movelaria’s Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>Aimed at product and process exploitation (continuous improvement) or exploratory initiatives (new products, concepts and marketing).</td>
<td>The MP has been focused on continuous improvement.</td>
</tr>
<tr>
<td>RBV</td>
<td>Sustainable superior performance requires valuable capabilities, difficult to copy, rare and difficult to replace.</td>
<td>The social assets and their collaboration dynamics are valuable resources.</td>
</tr>
<tr>
<td>Social Networks</td>
<td>The collaborative networks are movements of informal systems that are self-working towards a common goal. It is a continuous building process which is better conducted in an environment where there is diversity, is more organic and less formal.</td>
<td>The substantive theory aggregates value providing an example of the evolution and dynamics of a network of small businesses.</td>
</tr>
<tr>
<td>Transaction Cost Economics and Network Theory</td>
<td>Minimize transaction costs, using the trust and cooperation in the network, to reduce the levels of uncertainty, increase the frequency of transactions and the exchange and sharing the assets involved.</td>
<td>It explains what MP fears losing, but provides no alternatives to understand the current discomfort and how to overcome them.</td>
</tr>
<tr>
<td>Economic Sociology.</td>
<td>Concepts of conduct standards and network density (denser the relationship more clear is the expected behaviour), the strength of weak ties (diversity of knowledge); importance of structural holes (ways to connect knowledge); social embeddedness (economic and noneconomic activities inter-mixed)</td>
<td>Expand the substantive theory providing alternatives to increase their base of knowledge and experiences by weak ties and uncovering the structural holes</td>
</tr>
</tbody>
</table>

Table 3 – Theoretical mainstream and MP’s Collaboration Dynamics
5 Final Considerations and Directions for Future Research

The substantive theory has not the intention to any statistical generalization of results. The target generalization of this type of research lies in theoretical terms, to the extent that the variability of the phenomenon is considered in its propositions. In the MP case the procedural studies cover only six years, so it can be argued that it does not allow a considerable variation in the external and internal network environment, suggesting that further case studies need to be conducted to increase its explanatory power. Even though the substantive theory is flexible and allows changes as new variations of the phenomenon are identified by new cases studies, they should not deny the previous theory; instead of they should improve the current categories and develop new theories.

Another point of concern is the nature of propositions. We do not have any pretension to isolate variables to discern cause-effect relations. The research design and ex post characteristics would not allow such procedure. In fact, the propositions must be understood as co-relationship between contexts and observed behaviours. For example, other variables could be acting on how the projects are conducted, such as the availability of financial resources and conflicts of interest, but the propositions presented here have the elements highlighted by the interviewees and in our view constitute a framework consistent with the MP’s collaboration dynamics.

These results were compared with the literature in the last section. After analysis, we have ratified that there is no single current theory that explains how the collaboration dynamics has affected the result of innovations in the MP. The substantive theory explains how the previous experiences and the common values favoured their innovation deployment, as well as lack of knowledge and experiences that enable solutions to internal issues are affecting negatively the results of innovations. With respect to convergent points, building trust and relationships are remarkable aspects in the MP’s history as well as the importance of increase weak ties and uncover structural holes to expand the base of knowledge and experiences.

One aspect not explored in this article was to look at the substantive theory under the lens of social entrepreneurship, as throughout the MP’s data analysis there is a concern with their role within the industry sector and society. There is evidence that this is glue between their members, but requires a deeper analysis.
The substantive theory contributes directly to the MP’s actions by providing subsidies to expand their understanding of how their collaboration dynamics works. The entrepreneurs can promote greater communication space, in order to define a common sense to address projects’ issues, ensuring the turnover in management roles and participation of all members. The institutions can review their roles, acting as agents that help expand the MP’s base of knowledge and experiences by bridging ties with different networks or integrating new members to the MP.

A practical contribution of this study to SEBRAE is to enhance their knowledge base to explore and assess the context of SMEs networks, before the services are started, exploring the network’s repository of previous experiences and shared values. In addition, the partnership with SEBRAE and research centres can enable monitoring and keeping abreast of SME’s networks, so that a longitudinal study can be designed in a broader scope and comprehensiveness.

**Bibliography**


The Perception of Entrepreneurial Orientation among the Organization – a Triangulation Approach

Markus Braun, Mario Geissler and Christoph Mueller

The concept of Entrepreneurial Orientation (EO) has not only become a dominant subject in entrepreneurship research, but has also shown practical relevance in both defining as well as exploring the strategy of the firm. We argue that there is reasonable doubt that the management team assesses the EO of the company the same way as other employees or business partners do. The subject of this analysis is a high tech company of 318 employees, started in 1995 in Saxony, Germany. By applying statistical methods, we find no significant difference in the perception of EO between managers, employees and business partners.

Principal Topic

During last years, the concept of Entrepreneurial Orientation (EO) has not only become a dominant subject in entrepreneurship research, but has also shown practical relevance in both defining as well as exploring the strategy of the firm. (Simsek et al., 2010; Naldi et al, 2007). The concept of EO has since then become a widely used tool in entrepreneurship research. According to a number of studies, Entrepreneurial Orientation has an influence on performance (see for example, Rauch, Wiklund, Lumpkin and Frese 2009 for a meta study of 51 studies). EO plays also an important role in prominent studies about long and fast growing companies like Collins (2001) and McFarland (2009).
Entrepreneurial Orientation

The concept of Entrepreneurial Orientation has first been developed by Miller (1983). In this paper, Miller shifts the focus of analysis from the entrepreneur as actor to the entrepreneurial activity of the firm and the entrepreneurial process. He defines the entrepreneurial firm as “one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch” (compare further Toulouse 1980; Kets de Vries 1977). Entrepreneurship is presented as a multidimensional concept, an aggregate variable consisting of the “composite weighting of these three variables”, innovativeness, risk-taking and proactiveness. As Miller points out, firms that do reach high levels in two of the three dimensions may well be acting all but entrepreneurial, hence his focus on the composite dimension. The dimensions may vary independently, but to call a firm entrepreneurial, it must reach a certain level in each of these dimensions.

As in his earlier works (for example Miller and Friesen 1982, Miller and Friesen 1980), Miller (1983) examines the entrepreneurial character of the firm by taking questionnaires from top management executives. Miller and Friesen (1982), and subsequently Miller (1983), link the measures directly to the profiles of top management, “their goals and temperaments” (Miller and Friesen 1982). According to Basso, Fayolle and Bouchard (2009), they argue that “the choice of strategy, entrepreneurial or conservative, is thus determined more by the nature of top managers”.

The concept of entrepreneurial orientation is then clarified and expanded by Lumpkin & Dess (1996). They make the distinction between entrepreneurship as the act of new entry, and entrepreneurial orientation as “the methods, practices, and decision-making styles managers use to act entrepreneurially“. According to them, “new entry explains what entrepreneurship consists of, and entrepreneurial orientation describes how new entry is undertaken”. To account for this view, Lumpkin and Dess also introduce two additional dimensions to the construct:
Autonomy and Competitive Aggressiveness. According to them, Autonomy refers to “the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion”, while Competitive Aggressiveness refers to “a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace”. In contrast to Miller, they position EO not as referring to the nature of the firm, but as referring to new entry. As Basso, Fayolle and Bouchard (2009) point out, this leads to a number of alteration compared to the original concept, including the ways of examination – while Miller targeted “top executives” to answer the questionnaires, Lumpkin and Dess expand the focus to “key players” in the area of new entry, while not explicitly defining them. Basso, Fayolle and Bouchard further point out that this “poses serious operationalization problems, which later articles will fail to solve”.

The Problem of Self-Reported Managerial Perceptions

The original studies of Miller (1983) and Covin and Slevin (1989) apply self-reported managerial perceptions to measure EO. Their measurement approach, sometimes adapted, was used in most subsequent studies. Lyon et al (2000) find that of a sample of 32 studies utilizing EO, 21 studies measure it by managerial perception, with six studies using direct behaviour measures and five studies employing resource allocation. These authors, in line with other researchers, argue that, besides the advantage for research design (sample size), “the views of the respondent may, in fact, reflect those of the firm”, especially in case of smaller firms. However, the same approach is used widely also on medium-sized and large companies – for example, Rauch, Wiklund, Lumpkin and Frese (2009) report that of 51 studies examined, 15 were mid-sized or large.

We argue that there is reasonable doubt that within a moderately grown venture, the top management team assesses the EO of the company the same way as other employees or business partners do. As organizational reasearch suggests an organization might have characteristics
that differs from characteristics of their members. Thus, measuring organizational characteristics may differ from methods employed for measuring individual characteristics (for example, Weiss, 1994). As a result, a distinction is made between informants and respondents regarding the participants in studies dealing with organizational level issues. While an informant gives specific information about organizational characteristics (for example, level of innovativeness, bureaucratic or flexible) the latter provides information about itself as an individual (for example, the personal view about organizational events or procedures). Furthermore, different studies empirically demonstrate the danger arising from the use of single informants for the analysis of organizational phenomena (for example, Ernst and Teichert, 1998; Phillips, 1981). In detail, they address lacking knowledge about the focused issue and the position held in the company as possible sources for the informant bias. In this respect, respondents need to be knowledgeable about the focused issue and need to provide consistent as well as unbiased answers (Ernst and Teichert, 1998).

**Research Question**

Taking this into account, our research addresses the question, “Does the perception of a company’s Entrepreneurial Orientation vary among different groups within and outside the company (for example, management team, the employees, business partners of the company)? If so, can these differences be explained by organizational aspects (for example, position held in company)?” Therefore, our study aims at validating the practice of using top-management self-reported perception as a proxy for the firm’s Entrepreneurial Orientation. We test the results of the top management team against the perception of the full sample of employees of the company, as well as against the perception of other business partners.

Since we assume that the assessment of a company’s Entrepreneurial Orientation differs among the organisation, we test the following hypotheses:
H1: There is a significant difference in the perception of a company’s Entrepreneurial Orientation between the top management team and other employees,

and

H2: There is a significant difference in the perception of a company’s Entrepreneurial Orientation between the employees of the company and the company’s business partners.

Sample

We are currently researching a number of small and medium sized companies in Germany. In this paper, we are able to report first results.

The first subject of our analysis is a high tech company, started in 1995 in Saxony, Germany. Based on university research, the venture provides casting molds for rapid prototyping and has grown up to 350 employees and € 35 million in revenues in 2009. The founder of the company still owns the majority and is serving as CEO.

The management team of the company is composed by three members of the executive board and two additional managers. On the next level, there are 17 team and shift supervisors. Currently, they have 318 employees in total.

The survey itself was carried out in paper form. 74 of the 318 employees answered the survey, including four of the five members of the management team, 17 team or shift leaders, 47 workers and 6 key account managers.

Unfortunately, we were not able to receive the results of the business partners in time. As a proxy for the outside view of the firm, we therefore decided to use the key account managers, since they work on the interface between customers and the company, should be well aware of the thoughts of their clients and may have adopted them.
Methodology

To measure Entrepreneurial Orientation, we follow the approach of Lumpkin, Cogliser and Schneider (2009) and employ the most commonly used EO items, that is Covin and Slevin (1989), Lumpkin and Dess (2001), Lumpkin (1998), and for the autonomy measure the results of Lumpkin, Cogliser and Schneider (2009) themselves. Since the focus of our research is the work force of a German company, we could not assume the necessary level of the English language to understand the questions as they were and chose to translate them to German. The translation was executed as close to the original as possible, but with regard to the different sources of the original questions, careful adaptations have been made. Covin and Slevin (1989) give in general not only a statement and ask the respondents to specify their level of agreement to it, but also specifies the alternative, which is in general the opposite. In the German translation, we chose to leave the alternative statements out. An overview of the original questions, their origin and their German translation can be found in Table 1.

Table 1
EO Item Ratings and German Translations

<table>
<thead>
<tr>
<th>Original Statement</th>
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<tbody>
<tr>
<td>Autonomy:</td>
</tr>
<tr>
<td>My firm supports the efforts of individuals and/or teams that work autonomously as compared with requiring individuals and/or teams to rely on senior managers to guide their work.</td>
</tr>
<tr>
<td>The managers of my firm believe that the best results occur when individuals and/or teams decide for themselves what business opportunities to pursue (rather than when the CEO and top managers provide the primary impetus for pursuing business opportunities).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>German Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mein Unternehmen unterstützt die Bemühungen von Personen oder Teams, eigenverantwortlich zu arbeiten, anstatt die Zustimmung von Vorgesetzten einholen zu müssen</td>
</tr>
<tr>
<td>Die Führungskräfte meines Unternehmens glauben, dass sich die besten Ergebnisse erzielen lassen, wenn Personen oder Teams selbst entscheiden, welche Geschäftsmöglichkeiten sie wahrnehmen, statt diese Entscheidungen dem Geschäftsführer oder der Geschäftsleitung zu überlassen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumpkin, Cogliser and Schneider (2009)</td>
</tr>
<tr>
<td>Lumpkin, Cogliser and Schneider (2009)</td>
</tr>
</tbody>
</table>
**Table 1 (continued)**

**EO Item Ratings and German Translations**

<table>
<thead>
<tr>
<th>Original Statement</th>
<th>German Translation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my firm, individuals and/or teams pursuing business opportunities make decisions on their own without constantly referring to their supervisors (instead of having to obtain approval from their supervisors before making decisions).</td>
<td>In meinem Unternehmen treffen Personen oder Teams selbständig Entscheidungen, welche Geschäftsmöglichkeiten sie wahrnehmen wollen, ohne fortwährend die Erlaubnis Ihres Vorgesetzten einholen zu müssen.</td>
<td>Lumpkin, Cogliser and Schneider (2009)</td>
</tr>
<tr>
<td>In my firm, the CEO and top management team (rather than employee initiatives and input) play a major role in identifying and selecting the entrepreneurial opportunities my firm pursues.</td>
<td>Geschäftsmöglichkeiten, die mein Unternehmen verfolgt, werden eher von der Geschäftsführung als von Mitarbeitern oder Außenstehenden identifiziert und ausge wählt.</td>
<td>Lumpkin, Cogliser and Schneider (2009)</td>
</tr>
<tr>
<td><strong>Innovativeness:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, top managers of my firm favor a strong emphasis on the marketing of tried and true products and services as compared with an emphasis on R &amp; D, technological leadership, and innovations</td>
<td>Im Allgemeinen legt die Geschäftsführung bei uns eher den Schwerpunkt auf die Vermarktung von bewährten Produkten und Dienstleistungen, anstelle den Schwerpunkt auf Forschung &amp; Entwicklung, Innovationen und Technologieführerschaft zu legen.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>In the last five years, my firm has marketed no new lines of products or services as compared with very many new product lines or services</td>
<td>In den letzten fünf Jahren hat mein Unternehmen keine neuen Produkte oder Dienstleistungen auf dem Markt gebracht</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>In my firm, changes in product or service lines have been mostly of a minor nature as compared with being quite dramatic</td>
<td>In meinem Unternehmen sind Änderungen an Produkten oder Dienstleistungen eher kleinerer Natur und nicht tiefgreifend.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>The top managers of my firm favor experimentation and original approaches to problem solving rather than imitating methods that other firms have used for solving their problems</td>
<td>Unser Unternehmen ist bei der Lösung von Problemen eher experimentierfreudig und verfolgt originelle Ansätze, als Methoden anderer Unternehmen nach zu ahmen.</td>
<td>Lumpkin (1998)</td>
</tr>
</tbody>
</table>
Table 1 (continued)

EO Item Ratings and German Translations

<table>
<thead>
<tr>
<th>Original Statement</th>
<th>German Translation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>My firm prefers to design its own unique new processes and methods of production rather than adapting methods and techniques that others have developed and proven.</td>
<td>Mein Unternehmen entwirft lieber eigene Produktionsmethoden und –prozesse, anstelle die von anderen Unternehmen entwickelten und getesteten Vorgehensweisen zu übernehmen.</td>
<td>Lumpkin (1998)</td>
</tr>
<tr>
<td><strong>Proactiveness:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In dealing with competition, my firm typically responds to action which competitors initiate as compared with initiating action which the competition then responds to.</td>
<td>Im Wettbewerb mit anderen Unternehmen reagiert mein Unternehmen eher auf die Aktionen anderer Mitbewerber, anstelle selbst aktiv zu werden und die Konkurrenz zu Reaktionen zu zwingen.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>In dealing with competition, my firm is very seldom the first business to introduce new products/services, administrative techniques and operating technologies.</td>
<td>Im Vergleich mit anderen Unternehmen selten das erste, das ein neues Produkt, eine neue Dienstleistung oder neue Betriebsabläufe einführt.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>The top managers of my firm have a strong tendency to “follow the leader” in introducing new products or ideas (rather than being ahead of other competitors in introducing novel ideas or practices)</td>
<td>Mein Unternehmen führt neue Produkte oder Ideen in der Regel erst ein, wenn ein Wettbewerber sie bereits anbietet.</td>
<td>Lumpkin and Dess (2001)</td>
</tr>
</tbody>
</table>
### Table 1 (continued)

**EO Item Ratings and German Translations**

<table>
<thead>
<tr>
<th>Original Statement</th>
<th>German Translation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk Taking:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The top managers of my firm have a strong proclivity for low risk projects (with normal and certain rates of return) rather than high risk projects (with chances of very high return)</td>
<td>In meinem Unternehmen unterstützt die Unternehmensleitung eher Projekte mit geringem Risiko und sicherer, aber nicht allzu hoher Rendite, anstatt Projekte zu unterstützen, die riskanter sind, aber die Möglichkeit sehr hoher Gewinne bieten.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>The top managers of my firm believe that, owing to the nature of the environment, it is best to explore the environment gradually via careful, incremental behavior (rather than bold, wide-ranging acts necessary to achieve the firm’s objectives)</td>
<td>Die Unternehmensführung ist der Meinung, dass vorsichtige, kleine Schritte der bessere Weg sind, die Unternehmensziele zu erreichen, als gewagte, große Sprünge.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>When confronted with decision-making situations involving uncertainty, my firm typically adopts a cautious, “wait-and-see” posture in order to minimize the probability of making costly decisions (as compared with a bold, aggressive posture to maximize the probability of exploiting potential opportunities)</td>
<td>Bei unsicheren Entscheidungen ist mein Unternehmen vorsichtig und wartet erst einmal ab, um die Wahrscheinlichkeit kostspieliger Fehler zu verringern.</td>
<td>Covin and Slevin (1989)</td>
</tr>
<tr>
<td>The top managers of my firm prefer to study a problem thoroughly before deploying resources to solve it instead of being quick to spend money on potential solutions if problems are holding us back</td>
<td>In meinem Unternehmen werden Probleme erst eingehend studiert, bevor man Mittel auf die Lösung verwendet, anstatt schnell Geld in die Hand zu nehmen, um Hindernisse aus dem Weg zu räumen</td>
<td>Lumpkin (1998)</td>
</tr>
<tr>
<td><strong>Competitive Aggressiveness:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My firm is very aggressive and intensely competitive rather than making no special effort to take business from the competition</td>
<td>Mein Unternehmen agiert eher sehr aggressive und sehr wettbewerbsorientiert, anstatt dem Wettbewerb mögliche Geschäfte zu überlassen.</td>
<td>Lumpkin and Dess (2001)</td>
</tr>
</tbody>
</table>
Results

Table 2 shows the descriptive statistics of the different groups for each of the five dimensions. For each of the dimensions, the average of the factors was calculated, using only those answers where all factors for the dimension were available.

<table>
<thead>
<tr>
<th>N</th>
<th>Autonomy</th>
<th>Innovativeness</th>
<th>Proactiveness</th>
<th>Risk Taking</th>
<th>Competitive Aggressiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Supervisor</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Employee</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>Account</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td>74</td>
<td>74</td>
<td>74</td>
<td>74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>Autonomy</th>
<th>Innovativeness</th>
<th>Proactiveness</th>
<th>Risk Taking</th>
<th>Competitive Aggressiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>4,0625</td>
<td>2,7500</td>
<td>2,8125</td>
<td>2,9375</td>
<td>2,5000</td>
</tr>
<tr>
<td>Supervisor</td>
<td>3,9700</td>
<td>2,3680</td>
<td>2,4800</td>
<td>3,6267</td>
<td>3,0400</td>
</tr>
<tr>
<td>Employee</td>
<td>4,5128</td>
<td>2,5936</td>
<td>3,0000</td>
<td>3,6560</td>
<td>3,5789</td>
</tr>
<tr>
<td>Account</td>
<td>2,9167</td>
<td>2,4333</td>
<td>2,4583</td>
<td>3,7917</td>
<td>3,5000</td>
</tr>
</tbody>
</table>

To test for the validity of our translations, we test for reliability of the scale used to measure the four multi-factor dimensions (Autonomy, Innovativeness, Proactiveness, Risk Taking and Competitive Aggressiveness). The reliability test showed that of the four multi-factorial dimensions of Entrepreneurial Orientation, only two have at least a moderate reliability in the survey we used. Innovativeness and Proactiveness prove to be not reliable. This may be due to our translation, or indicate a general weakness in the scale. Due to these results, the significance of the results of the distribution of EO between employee groups may therefore be questionable for the two dimensions Innovativeness and Proactiveness. The detailed results can be found in table 3.
Table 3
Reliability of Applies EO Scale

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Valid Cases</th>
<th>Number of Items</th>
<th>Cronbachs Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-Taking</td>
<td>70</td>
<td>4</td>
<td>.667</td>
<td>OK</td>
</tr>
<tr>
<td>Autonomy</td>
<td>71</td>
<td>4</td>
<td>.780</td>
<td>GOOD</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>73</td>
<td>5</td>
<td>.476</td>
<td>BAD!</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>73</td>
<td>4</td>
<td>.391</td>
<td>BAD!</td>
</tr>
</tbody>
</table>

The different groups of employees (Management, Supervisors, Employee, Account Manager) show in some aspects quite different perception of the Entrepreneurial Orientation in their organisation. A first analysis based on the differences in means of the dimensions is shown in Figure 1.

Figure 1
Differences between Means over Groups
As can be seen, the differences between the groups is greatest in the dimensions Autonomy, Risk-Taking and Competitive Aggressiveness, while the two dimensions mentioned above for their questionable reliability do not differ that much. It seems that especially the key account manager, the employees who have most contact with the customers of the company, have a quite different view on the company than the management team. There seems to be a tendency by top management team to see the company as less risk-taking and competitive aggressive than the rest of the employees does. On the other hand, account managers seem to have a feeling that working autonomic is not part of the company’s posture.

To see if those differences are indeed a signal, we apply the Kruskal–Wallis rank test (h-test) to test for significant differences between the groups. Table 4 shows the results.

Table 4

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Chi-squared (with ties)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>3.430</td>
<td>0.3299</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.533</td>
<td>0.9116</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>5.269</td>
<td>0.1531</td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>4.293</td>
<td>0.2315</td>
</tr>
<tr>
<td>Competitive Aggressiveness</td>
<td>1.253</td>
<td>0.7403</td>
</tr>
</tbody>
</table>

As can be seen, the differences found by inspection prove to be not significant. To answer the hypotheses stated above, we furthermore tested the groups of management vs. other employees (excluding as account managers who serve as a proxy for customers), as well as account managers (as proxy for customers) vs. other employees. The results are shown in tables 5 and 6.
Table 5  
Kruskal-Wallis test: Management vs. Employees

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Chi-squared (with ties)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.003</td>
<td>0.9583</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.008</td>
<td>0.9272</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>0.014</td>
<td>0.9061</td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>2.325</td>
<td>0.1264</td>
</tr>
<tr>
<td>Competitive Aggressiveness</td>
<td>0.696</td>
<td>0.4042</td>
</tr>
</tbody>
</table>

There are no significant differences in the perception of Entrepreneurial Orientation by the management compared to other employees, so we must reject hypothesis H1.

Table 6  
Kruskal-Wallis test: Employees vs. Customers (Proxy)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Chi-squared (with ties)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>2.583</td>
<td>0.1087</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.002</td>
<td>0.9605</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>1.574</td>
<td>0.2096</td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>0.246</td>
<td>0.6196</td>
</tr>
<tr>
<td>Competitive Aggressiveness</td>
<td>0.421</td>
<td>0.5163</td>
</tr>
</tbody>
</table>

Regarding hypothesis H2, here too can no significant difference in the perception of the company between employees and business partners be found. H2 must also be rejected.

**Implications**

By applying statistical methods, we have shown there is no significant difference in the perception of Entrepreneurial Orientation between top managers, employees and business partners.

The results of the study seem to be a valuable hint into a direction that may prove valuable as implications not only for researchers, but also for practitioners. By clarifying that EO percep-
tion does not differ among the organisation itself as well as between the organisation and its
environment, we enable researchers to collect EO measures more efficiently by allowing to
not only ask the management team, but also other members of the business sphere instead.
Also, if Entrepreneurial Orientation is perceived equally all over the company, it may be used
as a tool to direct a company and implement strategic decisions.

Limitations and Future Research

This study has a number of limitations. All of these limitations should serve as starting point
for future research.

The first limitation regards our sample. It is limited to a single company, thus making it diffi-
cult to generalize the results we have found here. Also, the actual size of the groups is in some
cases very small – the top management team group consists of four replies, the account man-
ger group of six. While this does not invalidate the results we have, it gives reason to repeat
the analysis with a bigger sample.

Second, the group of external business partners was not taken into account directly, but via a
proxy that comes from within the company. We believe that this is a valid way if no contact
with business partners can be made – however, the results of this should be validated by using
external business partners themselves.

Third, the survey used proved not to be reliable in part. The development of a reliable and
verified German-language version of the test still needs to be done and would be proof valu-
able for entrepreneurship researchers, since it would allow to include the wide range of Ger-
man-speaking companies in the samples.
References


Müller / Bouwsma (2010)


Stakeholder Patronage as Influencers of Micro-enterprise Growth at Kamukunji in Nairobi, Kenya

Huldah Oroko

Abstract

The paper provides knowledge on stakeholder patronage as determinates of growth. Literature review indicates that concepts, theories, and stakeholder patronage influencing growth are developed in Western countries yet their applicability in Kenyan context is contestable. A correlational survey research design meets the objective of the study. The sample includes 354 micro-enterprises selected by systematic sampling from Kamukunji Jua Kali Association membership register. Data were collected using structured questionnaire, observation guide, and field notes. Factor analysis determines seven stakeholder patronage namely: debtors, professional advisors, employees and partners, bank managers, friends, suppliers, and family. Key findings indicate that stakeholder patronage model (65.33 percent variance explained) remain conceptually valid. Kaiser-Meyer-Olkin measure of sampling adequacy is good (KMO = .87) and Bartlett’s test of Sphericity is significant (.001). Hypothesis testing of 13 hypotheses indicates 76.92 percent acceptance. The paper emanates from the thesis fulfilling the requirements for degree of Doctor of Philosophy of Kenyatta University.

Key Words— Stakeholder Patronage, Growth, Micro-enterprises, Manufacturing, Metallic Products, Kamukunji

Introduction

The last two decades have witnessed massive downsizing and restructuring of many large enterprises in the global economy (Audretsh, Carree, & Thurik, 2001). As a result, micro-enterprises have increased internationally. Due to this economic swing, the micro-enterprises have increased both in number and size worldwide (Grilo & Thurik, 2004). The increment leads to depiction of micro-enterprises as an avenue for economic development or engine for growth (Mambula & Sawyer, 2004; Jack & Anderson, 1999). The focus on micro-enterprises has been influenced by the transformation of micro- and macro-economic policies in developed and
developing countries. These changes in policies have brought a global economic turnaround with a paradigm shift which lays emphasis on the growth of micro-enterprises.

Literature review indicates that concepts, theories and factors influencing growth of micro-enterprises featured in the study are largely developed by studies from Western countries particularly United States of America and Europe (Greiner, 1979; Churchill & Lewis, 1983; Scott & Bruce, 1987; Perren, 1999). Few studies determine whether these concepts, theories, and empirical studies are applicable to micro-enterprises in Sub-Saharan Africa generally and specifically in Kenya (Namusonge, 1998; Karimi, 1998; Teal, 1998; Bisebroeck, 2005). This literature implies insufficient empirical studies to elaborate the development of factors influencing growth of micro-enterprises manufacturing metallic products in Kenya. The study intends to bridge this research gap. Specifically, the study seeks to validate and determine the extent to which stakeholder patronage influences growth of micro-enterprises. The hypotheses dwell on the premise that the relationship between stakeholder patronage and growth happens to be significantly moderated by the entrepreneur and enterprise profiles and; hence, expects positive influence. The study is on micro-enterprises manufacturing metallic products at Kamukunji in Nairobi. Kamukunji lies in the eastern side of the City of Nairobi, the capital city of Kenya. Nairobi is fondly described as "the green city in the sun" because it seems to be below the tropical sun (King, 1996).

**Stakeholder Patronage and Enterprise Growth**

Patronage means the support given by a person that has an interest or shares in an enterprise (Macmillan Education, 2002). Patronage allows monetary and non monetary resources to be availed by the stakeholders to the micro-enterprises. According to Perren (1999), four
components of stakeholder patronage influence micro-enterprise growth namely: family and friends, employees and partners, professional advisors, and debtors and creditors.

The family and friends include parents, brothers, sisters, non-parents, non-brothers, and non-sisters investing in an enterprise. Women consistently report family and friends as an overwhelming source of support (Fielden et al., 2003). Most (86.7 percent) women entrepreneurs get support from husbands (Oroko, 1992). Younger women become entrepreneurs to balance family and work responsibilities (McKay, 2001). Family and friends have influence on entrepreneur’s growth motivation, expertise in managing growth, and resource access. Difficulties in an entrepreneur’s family life decreases growth as when an entrepreneur goes through marriage difficulties. Family offering an entrepreneur with managerial and financial support increases enterprise growth. Involvement in the enterprise by a member of family with sales ability also increases growth.

The employees receive salaries from the enterprise while partners share in the profits and own the enterprise (Macmillan Education, 2002). Most (55 percent) entrepreneurs obtain assistance from employees while away from the micro-enterprise (Karimi, 1998). Employees and partners have influence on expertise in managing growth and resource access. Micro-enterprise employing and accessing individuals who offer an entrepreneur support with management increases growth. On the contrary, micro-enterprise employing unsuitable individuals to help with management decreases growth. Employees who provide lower cost services than normally available in the labour market increases growth. Also, problems with employees decrease growth. Employees and partners with sales ability increases growth. Employees supplying core technical knowledge increases growth.
Employees and partners greatly influence growth (Macpherson et al., 2005). They bring along immense human capital and relevant experiences gained while working for large companies (Mambula & Sawyer, 2004; Fielden et al., 2003). Employee satisfaction turns out to be an important ingredient in growth (McKay, 2001). As an enterprise matures, an entrepreneur gives up some control and relinquishes the job at the head of the enterprise to someone else.

Professional advisors are experts who give advice to enterprises. Professional advisors have influence on expertise useful in managing growth. Bianchi, Raimondi, and Fasone (Retrieved July 9, 2005) found that professional advice transforms micro-enterprises from dwarfism to fast track growth. An entrepreneur accessing a professional advisor who offers help with the management of the micro-enterprise gets increases growth. These professionals are actors such as universities, research institutions, consultants, banks, science parks, and others.

Women entrepreneurs report that banks offer poor and extremely costly services besides the frustrations from bank managers (Fielden et al., 2003). Excessive formalised management procedures practised by banks stand in the way of innovation and flexibility (Gibb, 2006). All these measures call for cross-national partnerships, training services, and universities support (Lloyd-Reason & Mughan, 2002). Professional advisors help micro-enterprises to preserve and increase capability of moving the economy up the value chain.

Debtors are persons who owe money to an enterprise while creditors are persons to whom money is owed by an enterprise. Perren (1999) found that debtors have influence on resource access. Creditors like a supplier offering special terms increases growth. A supportive bank that issues loans increases growth. Quick paying customers and good debtor management practices increases growth too while poor debtor control decreases growth. Cash-based micro-enterprises with low stocks increase growth. A major bad and doubtful debt decreases growth.
Debtors like banks have stringent lending measures unfavourable to micro-enterprises. Collateral still remains the banks popular requirement. Micro-enterprises lack collateral which leads to small loans and mostly none at all (International Conference on Innovation, 2004). Deficiencies of funds lead to delay of payments to the suppliers and other creditors (Bigsten et al., 2000). Payment terms from creditors become unfavourable, making debts unpaid by customers for 56 days on average after product delivery (Valsamakis & Sprague, 2001). These delays create cash flow problems that revolve into obstacles to growth.

**The Conceptual Model**

The Conceptual model consists of the independent, moderating, and dependent variables. Independent variables are numbered Factor 1 to 7. Entrepreneur and enterprise profiles are the moderating variables numbered moderator 1 to 13. The dependent variable consists of four variables numbered growth 1 to 4. Each straight single-headed arrow indicates a hypothesised fundamental relationship in the direction of the arrow. The variables happen to be identified from theoretical frameworks developed by previous studies (Greiner, 1979; Churchill and Lewis, 1983; Scott and Bruce, 1987; Penrose, 1995; Perren, 1999). These variables used by other studies which are not specifically reviewed for this study are also adapted by this study. The study expects results on factors influencing growth of micro-enterprises at Kamukunji. The findings will be used by entrepreneurs, consultants, researchers, and policy makers to mainstream growth. The conceptual model is summarised in Figure 1.
Methodology

The research design for the study was a correlational survey. The correlation design delineates the important variables associated with the problem (Sekaran, 2003). The study was largely quantitative with the support of qualitative data. Quantitative data were analysed through the use of tables and statistics while qualitative data were analysed through the use of conceptualisation and in-depth analysis (Saunders, Lewis & Thornhill, 2000). The combination
of multiple data sources overcame the intrinsic bias that came from single and data sources. The quantitative data were collected by a self-administered questionnaire while qualitative data were collected through key informant interviews.

The target population for the study was micro-enterprises manufacturing metallic products at Kamukunji in Nairobi. The micro-enterprises consisted of sheet metal, metalwork, painting, welding, and scrap metal categories which were started by entrepreneurs. The micro-enterprises were sole proprietorships and partnerships owned by Kenyans of various ethnicities. After the researcher requested for updating, there were 1,118 micro-enterprises in Kamukunji Jua Kali Association membership register for the year 2006. These micro-enterprises formed the universe of the study. The sampling methodology involved the selection of the sample from micro-enterprises that fell under the definition of a micro-enterprise and were registered by the Kamukunji Jua Kali Association (2006) as metallic product manufacturers. The study used systematic sampling to select 354 micro-enterprises who participated in the study.

The survey was confined to the local area of Kamukunji metallic products manufacturing zone. Surveys are often carried out in a limited area and at one point in time (Johnson & Duberley, 2000). Data were collected for six months, between July and December 2006. The researcher made field notes when important issues surfaced that were not in the questionnaire. Data were analysed largely using quantitative with the support of qualitative techniques. Quantitative data were analysed using descriptive statistics, factor analysis, and Spearman rhos. The results of data analysis were presented in two ways: the textual presentation and Statistical Packages for Social Sciences outputs in tabular presentation showing exact numerical values in columns and rows. The outputs were in form of tables for easier interpretation, drawing of conclusions, and making appropriate recommendations.
Three measures were applied when assessing factorability of the matrix. The first measure was the visual inspection where if there was no factor loading greater than 0.30, then the data were inappropriate for factor analysis. All the factor loadings used were between 0.50 and 0.86. The second measure was Bartlett’s Test of Sphericity where the determinant of the matrix of the sums of products and cross-products was converted to a chi-square statistic and tested for significance. A significant result at 0.05 levels indicated that sufficient relationship existed among variables. Third measure was the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) which varied between 0 and 1 and values closer to 1 were better, in fact, there was 0.87 for stakeholder patronage. A value of 0.60 was a suggested minimum (UCLA, 2007). The internal consistency of items was assessed by the Cronbach’s alpha coefficient (\( \alpha \)). The alpha values ranged from a minimum of 0.64 to a maximum of 0.78 where a threshold of 0.50 checked for internal consistency among items (Sekaran, 2003).

A principal component analysis transformed all the variables into a set of composite variables that are not correlated to one another (Kothari, 2003). For example, stakeholder patronage measured four concepts of family and friends, employees and partners, professional advisors, debtors and creditors with seven questions each for friends and family and employees and partners. The professional advisors had four questions while debtors and creditors had 19 questions. After factor analysis of the 37 items, seven items were found with the right loadings, confirming that the concepts were measured correctly. In the initial solution, each variable had a mean of 0 and a standard deviation of ± 1. The variance of each variable was = 1. A useful factor accounted for more than 1 unit of variance and had eigenvalues \( \lambda > 1 \) and a percentage of variance explained \( (R^2) \) at a minimum of 50 percent where results turned out to be 65.33 percent. The initial solution suggested the number of factors that were extracted by the
final solution. A rule of thumb happened to be that the number of components with eigenvalues \( \lambda > 1 \) lies between the number of variables divided by 3 and 5.

The factor interpretability or factor pattern was clarified by rotating the factors using the orthogonal Varimax rotation method with Kaiser Normalisation. Orthogonal rotation was done because the factors are independent (Kothari, 2003). The Varimax rotation achieved loadings of ones and zeros in the columns of the component matrix. After rotation, the effect on loading of the factor pattern was assessed for increased or decreased change (Friel, 2007). The conceptual model and nature of items loading on each factor guided the labelling of factors. The assumption of unidimensionality was observed by ensuring that a variable represented a single concept. Summated scales option was adopted by this study because it is a compromise between the surrogate variable scale and factor score option. The main advantage of summated scales is that it is straightforward where items with high factor loadings are summated.

To examine the multivariate relationship between the dependent, independent, and moderating variables, the Spearman \( r \) was used. The main idea was to determine whether moderating variables had significant positive or negative relationship with independent variables and micro-enterprise growth. The 13 hypotheses were tested by Spearman rank correlation. Spearman rhos measured linear relationship between the variables and ranged from -1 to 1. The level of statistical significance were reported depending on probability (\( p \)) as: significant ranging \(.05 > p < .01\) and highly significant: \(.01 > p < .001\). Probabilities were based on two-tailed tests as each comparison had two possible directions.
Data Analysis and Interpretations

The objective of this study is to establish the relationship between stakeholder patronage and growth of micro-enterprises. Questions explore stakeholder patronage and respondents' answers are summarised in this section. Thirty nine items measure stakeholder patronage such as family and friends, employees and partners, professional advisors, and debtors and creditors using a five-point Likert-type scale questions. The Likert scale options are strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. The measures are above the threshold of 10 items necessary so as to avoid computational difficulties.

Factor Analysis Results

Using factor analysis, underlying variables are identified. The principal components analysis extracts an initial solution from an intercorrelation matrix where nine components are extracted out of the seven target variables. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO = 0.87) is meritorious almost at the marvellous threshold of 0.9 to 1. The Bartlett Test of Sphericity is very highly significant at 0.001 level ($\chi^2 = 6837.25$, $df = 741$, $p = .00$) showing that factor analysis using principal component is relevant for the data set. These results imply that the correlation matrix is an identity matrix.

The results of the initial eigenvalues of the first nine variables indicate total variance of >1. The cumulative percentage of variance explained ($R^2$) by the nine variables (65.33 percent) stays above the threshold of 50 percent. The results indicate that 65.33 percent of the common variance shared by the 39 variables is accounted for by the nine factors. The nine-component factor model measures a goodness of fit which accounts for substantial amount of variance. Further, the first variable has high eigenvalues ($\varphi = 9.87$). It becomes the most important variable
because of being greater than 1 and explaining more variance than a single variable, in fact 9.87. The first component explains percentage variance of 25.32 percent. The least component variance explained (2.95 percent) has a low eigenvalues of $\lambda = 1.15$. The practical implication of this finding is that the remaining factors 10 through 39 have eigenvalues less than 1, and therefore, explains less variance than a single variable.

Results indicate that the sum of the eigenvalues associated with each variable totals 39 which represent the number of variables factored. Rotation in F-dimensional space clarifies the factor pattern. To avoid ambiguous interpretation, Varimax with Kaiser Normalisation rotation method was performed. The orthogonal rotation preserves the independence of factors; geometrically at 90° apart. Varimax rotation method with Kaiser Normalisation reduces data and provides results by using factor loadings ($FL$) above 0.30. The rotation converged in 10 iterations. The Varimax attempts to achieve factor loadings of ones and zeros in the columns of the component matrix (1 & 0). Variables which load greater than 0.30 for each component combine to form six factors namely: debtors, professional advisors, employees and partners, bank managers, friends, suppliers, and family. The orthogonal rotation reduces the nine to seven components extracted by the principal component analysis method. Family and friends stakeholder patronage becomes two factors: 18 and 20 respectively.

The first component factor extracted is Debtors (Factor 1) which comprises of: keeping a watchful eye on people who owe me is difficult ($FL = 0.86$), the terms of trade are not favourable ($FL = 0.81$), it is likely that I will suffer a major bad debt ($FL = 0.78$), I do not know how to chase people who owe me money ($FL = 0.78$), my debtors do not settle their accounts quickly ($FL = 0.78$), and I know steps to take to reduce bad and doubtful debts ($FL = 0.71$). These six items are summated to form an interval scale ranging from a low of 6.00 ($n = 123$, 34.7 percent)
to a high of 30.00 ($n = 4, 1.1$ percent) scores with mean of 14.50 ($SD = 7.36$). A score closer to 6.00 indicates few bad and doubtful debts while a higher score of 30.00 specifies many bad and doubtful debts. The majority of the micro-enterprises score 6.00 ($n = 123, 34.7$ percent) seconded by 24.00 ($n = 19, 5.4$ percent) scores. Results imply that Factor 1 is less likely to influence growth as most micro-enterprises score 6. Lack of trust between micro-enterprises and debtors has a negative influence on growth. The Cronbach’s coefficient alpha of internal consistency of items is significant ($a = 0.78$).

The second component factor extracted is Professional advisors (Factor 2) consisting of stakeholder patronage that encompass: I put in a lot of effort in order to obtain professional advice ($FL = 0.77$), professional advisors ($FL = 0.76$), I have access to professional advisors who offer help with management of growth ($FL = 0.73$), professional advisors, like accountants, help with the setting up of support systems ($FL = 0.67$), and professional advisors, like bank managers, help with running of support systems ($FL = 0.61$). These five items are summated resulting in scores ranging from a minimum of 5.00 ($n = 102, 28.8$ percent) to a maximum of 25.00 ($n = 4, 1.1$ percent) with mean of 11.18 ($SD = 5.63$). A score closer to 5.00 indicate low linkage to professional advisors while a higher score of 25.00 specify high linkage to professional advisors. The majority of micro-enterprises score 5.00 ($n = 102, 28.8$ percent) seconded by 9.00 ($n = 32, 9$ percent) scores. Results indicate that Factor 2 is less likely to influence growth as most micro-enterprises score 5.00 ($n = 102, 28.8$ percent). The alpha shows high internal consistency of the items ($a = 0.70$).

The third component factor extracted is Employees and partners (Factor 3) involving items expressed as: I have employees and partners who have good sales abilities ($FL = 0.74$), loss of employees and partners will drastically reduce sales ($FL = 0.70$), employees have set up
stock control and customer records ($FL = 0.68$), employees work with minimum supervision ($FL = 0.67$), my employees are willing to work longer hours ($FL = 0.66$), and my partners help me with the running of support systems ($FL = 0.64$). These six items are summated to form an interval scale, for the factor F3, which has a low of 7.00 ($n = 60, 16.9$ percent) to a high of 35.00 ($n = 3, 0.8$ percent) scores. A score closer to 7.00 indicate low patronage from employees and partners while a higher score of 35.00 specify high patronage from employees and partners. The mean turns out to be 19.02 ($SD = 7.44$) with the majority of micro-enterprises scoring 7.00 ($n = 60, 16.9$ percent). Results have three implications. First, a large of number of micro-enterprises has neither employees nor partners. Second, the micro-enterprises are highly independent preferring to work singly than in teams. Third, the Factor 3 is less likely to influence growth as majority of micro-enterprises score 7.00. Reliability test with the alpha show internal consistency of the items ($a = 0.68$).

The fourth component factor extracted is Bank managers (Factor 4) load highly on items described as: my relationship with the bank managers is cordial ($FL = 0.82$), I am trying to make the bank more supportive ($FL = 0.80$), my bank is supportive ($FL = 0.71$), and I keep the bank informed on how the micro-enterprise is going on ($FL = 0.67$). These four items are summated resulting in an interval scale ranging from a low of 5.00 ($n = 101, 28.5$ percent) to a high of 25.00 ($n = 5, 1.4$ percent) scores. A score closer to 5.00 indicate low support from bank managers while a higher score of 25.00 denotes high support from bank managers. The majority of micro-enterprises score 5.00 ($n = 101, 28.5$ percent) seconded by 10.00 ($n = 35, 9.9$ percent) scores. The mean becomes 11.34 ($SD = 5.39$). Results have two practical implications. First, high proportion of micro-enterprises has low bank managers bond due to collateral and regular
income requirements coupled with high interest rates. Second, Factor 4 is less likely to influence growth. Reliability test with the alpha shows a high internal consistency of the items ($a = 0.75$).

The first component factor extracted is Friends (Factor 5) using items depicted as: my friends are willing to let me use their non monetary assets ($FL = 0.79$), my friends have money that I can use to maintain the micro-enterprise ($FL = 0.77$), my friends have worked in an office before and have helped me in bookkeeping skills ($FL = 0.63$), and my friends help with setting up and running of support system ($FL = 0.57$). These four items are summated to form an interval scale ranging from a low of 4.00 ($n = 67$, 18.9 percent) to a high of 39.00 (1, .3 percent) scores. A score closer to 4.00 indicate low support from friends while a higher score of 39.00 stipulates high support from friends. The majority of micro-enterprises score 4.00 ($n = 67$, 18.9 percent) seconded by 8.00 ($n = 43$, 12.1 percent) scores. The mean happens to be 9.85 ($SD = 4.75$). Results have two practical implications. First, the high number of micro-enterprises have a low proportion of F6 due to manual productivity that require a lot of time. Second, the micro-enterprises are not getting support from friends due to limited time for networking. Hence, factor 5 is less likely to influence growth. Reliability test with the alpha show an internal consistency of the items ($a = 0.69$).

Suppliers (F6) load highly on items that incorporate: I am able to negotiate even better terms from my suppliers ($FL = 0.80$), my suppliers give me first class service ($FL = 0.79$), I am currently receiving special terms from my suppliers ($FL = 0.73$), and I have many suppliers who offer favourable terms of trade ($FL = 0.64$). These four items are summated to form an interval scale ranging from a low of 4.00 ($n = 14$, 4 percent) to a high of 20.00 ($n = 11$, 3.1 percent) scores with a mean of 12.37 ($SD = 4.16$). The majority of micro-enterprises score 16.00 ($n = 54$, 15.3 percent) seconded by 8.00 ($n = 37$, 10.5 percent) scores. Results have two practical
implications. First, a large number of micro-enterprises have a high proportion of Factor 6. Second, the Factor 6 is highly likely to influence growth. Reliability test with the alpha shows a high level of internal consistency of the items ($a = 0.74$).

Family (F7) consists three items that comprises of: family problems affect my micro-enterprise drive ($FL = 0.67$), I take several steps to reduce family friction ($FL = 0.67$), and family and friends ($FL = 0.58$). The resulting interval scale range from a low of 3.00 ($n = 9$, 2.5 percent) to a high of 15.00 ($n = 9$, 2.5 percent) scores with a mean of 9.66 ($SD = 3.18$). The majority of micro-enterprises score 13.00 ($n = 46$, 13 percent) seconded by 9.00, 10.00, and 14.00 ($n = 36$, 10.2 percent) scores each. Results have two practical implications. First, a large number of micro-enterprises have a high proportion of family. Second, family highly influences growth. Reliability test with the alpha show internal consistency of items ($a = 0.64$).

**Hypotheses Testing**

The 13 hypotheses were tested using Spearman rank correlation coefficients resulting in partial acceptance of 76.92 percent. The Spearman rhos measure significance of the relationship between stakeholder patronage, growth, and moderating variables according to the conceptual model. Rank correlation happen to be used because data indicate a departure from normality.

H1: Stakeholder patronage has significant relationship with growth of micro-enterprises for entrepreneurs aged 26 ÷ 35 years than 36 ÷ 45 years. Entrepreneur’s age moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions’ growth. The hypothesis is accepted.

H2: Stakeholder patronage has significant relationship with growth of micro-enterprises for male than female entrepreneurs. Gender of an entrepreneur moderates the relationship
between stakeholder patronage, employees, sales, departments, and divisions’ growth. The hypothesis is accepted.

H3: Stakeholder patronage has significant relationship with growth of micro-enterprises for entrepreneurs with primary than secondary education. Level of education of an entrepreneur moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions’ growth. The hypothesis is accepted.

H4: Stakeholder patronage has significant relationship with growth of micro-enterprises for Luo than Kikuyu entrepreneurs. Ethnicity of an entrepreneur moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions’ growth. The hypothesis is accepted.

H5: Stakeholder patronage has significant relationship with growth of micro-enterprises for Protestant than Catholic entrepreneurs. Religion of an entrepreneur does not moderate the relationship between stakeholder patronage and employees growth but moderates the relationship between stakeholder patronage, sales, departments, and divisions’ growth. The hypothesis is accepted.

H6: Stakeholder patronage has significant relationship with growth of micro-enterprises for married than unmarried entrepreneurs. Marital status of an entrepreneur moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions’ growth. The hypothesis is accepted.

H7: Stakeholder patronage has significant relationship with growth of micro-enterprises for entrepreneurs with farming than enterprise managing fathers. Entrepreneur’s father’s
occupation moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is rejected.

H8: Stakeholder patronage has significant relationship with growth of micro-enterprises for entrepreneurs with farming than enterprise managing mothers. Entrepreneur's mother's occupation moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is rejected.

H9: Stakeholder patronage has significant relationship with growth of micro-enterprises categorised as sheet metal than metalwork. Enterprise's category moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is accepted.

H10: Stakeholder patronage has significant relationship with growth of micro-enterprises aged 1–10 years than 11–20 years. Enterprise's age moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is accepted.

H11: Stakeholder patronage has significant relationship with growth of micro-enterprises for sole proprietorships than partnerships. Type of business moderates the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is accepted.

H12: Stakeholder patronage has significant relationship with growth of micro-enterprises sales than divisions' priority growth goal. Enterprise's priority growth goal moderates the relationship between stakeholder patronage employees, sales, and divisions growth but does not
moderate the relationship between stakeholder patronage and departments growth. The hypothesis is rejected.

H13: Stakeholder patronage has significant relationship with growth of micro-enterprises funded by personal than family savings. Enterprise's sources of funds moderate the relationship between stakeholder patronage, employees, sales, departments, and divisions' growth. The hypothesis is accepted.

**Discussion**

The discussion is on the level of agreement and disagreement between previous studies and this study. Correlation analysis indicates that as family increases, growth increases. Watson et al. (1998) indicate that micro-enterprises are likely to be supported by family. Perren (1999), however, disagrees and states that negative family patronage, especially when an entrepreneur goes through marriage difficulties, growth decreases. Entrepreneur's not allowing family problems to affect their drive increases growth. Entrepreneur's not taking several steps to reduce family friction decreases growth.

Correlation analysis reveals that as friends increase, growth increases. Studies show that friends' patronage increases growth (Perren, 1999; McKay, 2001; Fielden et al., 2003). Friends' willingness to let micro-enterprises use their monetary and non monetary assets increases growth. Friends not helping with the setting up and running of support systems decreases growth. Most entrepreneurs at Kamukunji come from poor backgrounds and are unlikely to have well-to-do friends.

Correlation analysis indicates that as employees and partners increases, growth increases. Perren (1999) suggests that having unsuitable individuals to help with the management of growth
can be a negative influence. Studies indicate that employees and partners have positive influence on growth (Mckay, 2001; McCarthy, 2003; Macpherson, 2004; Macpherson et al., 2005). Micro-enterprise having employees and partners who have good sales abilities increases growth while not having partners who help with the running of support systems decreases growth.

Correlation analysis indicates that as the professional advisors increase, growth increases too. Studies indicate that professional advisors offer help with management that facilitate the transformation of micro-enterprises from dwarfism to fast track growth (Perren, 1999; Lloyd-Reason and Mughan, 2002). Micro-enterprises putting in a lot of effort to obtain professional advice increases growth while not having professional advisors that help with the running of support systems decreases growth.

Correlation analysis indicates that as debtors increase, growth increases. Perren (1999) indicates that poor debt control management can be a negative influence. Other studies signify that debtors influence growth (Bigsten et al., 2000; Valsamakis and Sprague, 2001). Micro-enterprises being able to keep a watchful eye on debtors increases growth while not being able to reduce bad and doubtful debts decreases growth.

**Conclusion**

Growth is a complex and multi-dimensional element influenced by a myriad of interacting factors. Despite the innumerable factors influencing growth, the last two decades have witnessed massive downsizing and restructuring of many large enterprises in the global economy. Due to this swing, the micro-enterprises have increased both in number and size worldwide. The increment has led to depiction of micro-enterprises as engine for growth. The stakeholder patronage partially increases growth, ceteris paribus. Hypotheses testing results
reveal that professional advisors and employees and partners increase growth. As professional advisors and employees and partners increases, growth increases.

**Recommendations**

The technical institutes, polytechnics, and universities need to strengthen stakeholder patronage by training entrepreneurs on the control of family patronage. When delivering courses on entrepreneurship, it is possible to invite family to participate in the business clinics. Thus, family patronage increases. The family and suppliers have little influence on growth. However, the fact that these stakeholder patronages have little influence on growth needs further investigation.

Hypotheses can either be accepted or rejected. Most (76.92 percent) hypotheses for this study happen to be accepted. A study may be designed to identify factors that cause rejection of hypotheses (23.1 percent). The study was done way back in 2006, approximately five years ago, and since then, socio-politico-economic factors at Kamukunji have drastically changed. Results indicate that the concepts, theories, and factors influencing growth developed in Western countries particularly United States of America and Europe are partially applicable to Kamukunji. Micro- and macro-economic factors affecting micro-enterprises in various countries disagree leading to differences of results between countries. In conclusion, the concepts, theories and factors influencing growth of micro-enterprises at Kamukunji are not fully comparable to the ones in United States of America and Europe. Unique socio-politico-economic factors influence growth of micro-enterprises manufacturing metallic products at Kamukunji.
References


Workshop: Building the academic-business partnership in international education: Providing an experiential learning activity in a global setting for undergraduate students.

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Keywords: experiential learning; partnerships; research

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This workshop demonstrates an experiential learning activity in a global setting for undergraduate students. We demonstrate a partnership between the international business community and academics by sharing our College – International Trade Council “Global Research Initiative”. Presenters discuss issues confronted, solutions devised, success achieved and support obtained. The value to cooperating businesses and the International Trade Council is also shared.

This workshop is for educators seeking experiential learning opportunities, SME owners and managers who utilize the research conducted and trade organizations seeking additional benefits for members.
The Growth Strategies of French Listed SMEs:  
Towards a Distortion of the SMEs Concept

Nazik FADIL

Abstract

The SME and the stock exchange market are a strange alchemy! This is all the more surprising when the SME adopts an aggressive strategy focused on external growth, international openness; investment in technological innovation ... The definition of SMEs seems disoriented in this context and with such strategic behavior. This article is focused on the impact of stock market listing on the growth strategies of French SMEs and explores the distortion of the SME concept so caused. It includes a review of literature on organizational theory and entrepreneurial finance. It is based on a longitudinal methodology over seven years, following a sample of 65 listed SMEs and a control sample. Overall, it appears a significant effect on growth indicators in the direction of our presumptions of distortion.

Introduction

In the context of the current financial market crisis, many researchers and practitioners are questioning the value of the IPO (Initial Public Offering) decision, especially for small business. Of course, the listing offers a number of advantages (fundraising, brand awareness, capital liquidity, management control ...). It is nevertheless true that it creates a particular consideration in terms of cost, energy, obligation of transparency and the need to comply with promises ... This is all the more compelling when it is question of a small organization with limited resources, a highly concentrated ownership, centralized control and often a strong family presence.

The impact of the IPO performance has been the subject of multiple investigations into the U.S. market (Jain and Kini, 1994, Mikkelson et al., 1997) Asian (Cai and Wei, 1997; Wang, 2005) and European market (Pagano et al. 1998; felt, 2001; Coakley et al., 2004, 2004, 2004).

1 Professor of Finance in Normandy Business School.
Serve, 2007). Little research interested in the impact in terms of strategic behavior and even less to the particular case of SMEs. However, the link between stock market listing and the performance is not direct but occurs through the strategic variables. Indeed, the value theory teaches us that the origin of changes in performance are the strategic levers; growth is a component (Hoareau and Teller, 2001; Hirigoyen and Caby, 2001). As such, the objective of this paper is to clarify the impact of the IPO on the growth strategies of French SMEs.

The phenomenon of the SMEs listing is rare, but existing. It is therefore important to address this situation atypical or denaturing of SMEs concept, to check if the growth strategy that will result is in a logical anti-SME. The interest is twofold: In a practical perspective, this article focuses attention on part of the constellation of SMEs that decide to go public and explores the consequences in terms of growth. This is to ensure that the resources generated by the listing and control resulting, effectively promote SMEs development and provide, therefore, some answers about the change in performance that would result. In a theoretical viewpoint, this research provides insight into the distortion (or denaturation) of SMEs concept after the IPO and questions the consistency of growth strategies conducted after being listed with the SMEs concept. No study has been conducted to this end.

This paper is divided into two parts: the first presents the theoretical deductions. The second describes the methodology and analysis results.

1. **Theoretical Approach: Stock Listing, Growth and Contingent Specificity of SMEs**

The objective of this section is to present theoretical approaches that allow us to assume that the Stock Exchange listing would affect the growth strategies of SMEs. A reading of organizational theory sheds light on two key issues: the achievement of growth requires financial resources and governance that directs to value creation. The financial market meets both requirements. Particular attention will be paid to the case of SMEs. The phenomenon of
stock market listing in SMEs is fairly atypical or denaturant. This deserves a critical reflection on the subject of our work.

1.1. The listing on the stock market and growth strategies: lessons from organizational theories

Edith Penrose (1959), a founder of the growth theory, sees potential growth of a company as unlimited, but subject to restrictions related to managerial skills, procurement of inputs and outputs, to uncertainty and risk. In extension of this theory, Hambrick and Crozier (1985) and Bruton and Prasad (1997) conclude that the first cause that limits the growth of companies is the lack of liquidity (cash deprivation). Indeed, without financial resources, a company can not invest and improve its production, turnover and market share nationally let alone internationally ... It can not recruit or train staff and therefore improve the management skills, she can not diversify its risk ... In short, without financial growth trajectory in the sense of Penrose (1959), is hampered. Welbourne et al. (1998) introduce the concept of entrepreneurial growth ceiling (CGE: Entrepreneurial Growth Ceiling). They see the IPO as a means to generate financial resources and to break, therefore, that limit growth through investment in human resources and R & D. This type of deployment of financial resources from the listing reassures shareholders and the authorities of financial markets are creating shareholder value in the short term and ultimately ensure the long-term performance.

The resource-based approach considers the firm as a combination of heterogeneous resources that determines the performance (Pateraf, 1993). According to Barney (1991), achieving a sustainable competitive advantage based on resource use evaluable, rare, inimitable and not substitutable. Hofer and Schendel (1978) identified five types of strategic resources: financial, human, organizational and technological. In the same vein, Castrogiovanni (1991) and Covin and Slevin (1991) have shown that financial resources are positively correlated with the growth of the firm. Blowers et al. (1995) identify the benefits of
the IPO and specifically cite the improved financial conditions, capital to support growth "capital to sustain growth" opportunities for future funding and a means to grow externally "mergers and acquisitions "... That being said, the financial resources are not sufficient alone to stimulate growth. We need a system of governance that would guide the strategic leaders in this direction.

The agency theory considers the financial market as a control mechanism that would induce managers to make strategic choices in the direction of maximizing shareholder value (Jensen, 1993). Indeed, the regulatory bodies of financial markets, including the AMF (Autorité des Marchés Financiers)² agree to protect shareholders and ensure the transparency of information. This is, inter alia, through the requirement to publish annual reports and to inform shareholders of the strategies implemented and their consequences in terms of value creation. Leaders must be vigilant in their mode of development, their management and expenditure incurred. They must also comply with the promises of growth displayed. Otherwise, the disgruntled shareholders sell their shares, thus lowering the value of the company, with all negative consequences for executives (in terms of pay, reputation, difficulty in issuing new securities and the threat of takeover ...) Anyway, in the context of the "glass house", the leaders are not entirely free in their choices. Any strategic decision would be a signal about future prospects and have a direct impact on shareholder value.

As such, the signal theory is instructive. It aims to explain variations in stock prices through signals from the strategic decisions of leaders. They must not only make fair decisions, but also convince the market by positive signals (Vernimmen, 2009). The examples most frequently cited concern the financial strategies, the politics of finance (Ross, 1977) and distribution (Charest, 1978). The investments in profitable projects are also a signal about future prospects of the company that would involve an assessment of the stock price (Leland

² The equivalent of the SEC (Stock Exchange Commission)
and Pyle, 1977). In the absence of profitable growth, shareholders prefer to sell their shares, to garner liquidity and diversify their investment portfolio in more projects that create value.

Among the strategic levers of **value creation**, we can cite the growth strategies (Hirigoyen and Caby, 2001). Regarding organic growth, many researchers have demonstrated a positive relationship between the market value of the company and its investment in capital assets (Mc Connel and Muscarella, 1985), research and development (Copeland et al., 1994), (Chan et al., 1992) and generally any type of investments which are of strategic long-term (Woodbridge and Snow, 1990). We are therefore tempted at this stage to speculate as follows:

**H1: The stock market listing incentive to invest in organic growth.**

That said, Pagano et al. (1998) show that companies bidding to carry out the exchange of heavy investment and results in a high growth and high performance accounting. After the successful introduction, the authors found a decrease in performance and a reduction in investment. This is consistent with the hypothesis that the timing leader deliberately introduced his company during periods of strong performance or in the context of stock market euphoria (Cai and Wai (1997); Pagano et al (1998) and Coakley al. (2004); Serve (2007)). Some authors (Rangan (1998), Pastor-Llorca and Proveda-Fuentes (2006), Roosenboom et al. (2003)) refer to results management in the sense of reflecting growth prospects and a healthy financial position that would ensure the success the IPO. Thereafter, growth is not necessarily to go.

The contribution of external growth strategies on creating shareholder value is mixed. Such a strategy would potentially create value if it can control and strengthen the bargaining power vis-à-vis a partner (customer, supplier, competitor ...), to conquer new market shares and harness synergies and economies of scale. Overall, existing studies indicate that this type of growth, although it is favored by exchange of securities on the stock market is not necessarily create value for shareholders of the acquiring firm. It especially allows an
assessment of the securities of the target company (Couret and Hirigoyen, 1992, Caby, 1994) and a transfer of wealth in their favor, because of the premium offered (Roll, 1986 and Sudarsanam et al., 1993). From the perspective of creating value, we therefore assumed the following:

**H2: The stock market listing handicapping strategies of external growth**

All these theories reflect the impact of stock market listing on growth strategies. However, their scope (including agency theory, and signal value) is more concerned with big business. What is the particular case of SMEs, characterized by a high concentration of capital, an owner and a family structure often?

Van Loye (1991) considers that SMEs in its path toward growth is expected to open on the outside looking for additional financial resources in line with its rationality. New shareholders and financial institutions will emerge, thus promoting agency relationships and the associated costs. In the same vein, Charreaux (1998) finds that SMEs are not always spared of agency problems. For some, the conflicts are reduced because of the confusion of functions ownership / decision / control. For others, especially those who have opened their capital stock, traditional relationships are modified. According to Denis (2004), the SME is facing the same organizational problems: conflicts of agency and asymmetric information. These problems are more important in SMEs and require, therefore, contractual safeguards.

That said, many researchers continue to regard the SMEs, especially family, like the one that generates the smallest agency costs and more efficient forms of governance (Daily and Dolinger (1992) and Kang (2000)). Jensen and Meckling (1976) go further by saying that it is not necessary to establish mechanisms of governance in family firms. The costs associated are not without reducing performance. Schulz et al. (2001), by undertaking a study on family businesses in 1376, demonstrate that the combination of the functions of ownership and decision-making in general and in particular the homestead is not the mode of governance
more efficient. The agency problems may well exist, but they present themselves differently. They are mainly related to inefficient markets, treasury, the opportunism of the owner (Perrow, 1986), the existence of non-monetary incentives (Jensen, 1998), altruism notably members of the family (Simon (1993); Eschel et al (1998)), etc., It is nevertheless true that they support the hypothesis of a positive impact of this type of structure on performance if the system of corporate governance is efficient. The financial market is a component.

1.2. The SME and the Stock Market: what a strange alchemy!

From 455 firms listed on Euronext (B & C) and Alternext, 127 are SMEs. These companies have a turnover growth rate and total assets greater than their unlisted counterparts. They are 50% more likely to get into the category of larger size. The most successful of them outperform unlisted in terms of profitability and growth rate ... (Bank of France, 2010). This report sheds light on two key points: the stock exchange listing of SMEs is quite rare, but generates a spiral of growth. It follows clearly significant interest to the political powers. In terms of research, there is little work in this area. Most studies have looked at alternative sources of financing, including venture capital. Others are looking to finance upstream of the entrepreneurial venture. It is the seed capital which involved incubators, business angels, family contributions, aid from the state ... (Pare et al., 2009)

Finally, the theory of pecking order or pattern of life cycle Company, the company's IPO on the stock market remains the last resort of SMEs, after the cash flow and bank debt. The reasons why an SME go public are mainly related to funding opportunities. Indeed, the listed company may appeal to the financial market to carry out capital increases. It may well improve its investment capacity and financial independence, while retaining the benefits of leverage (Deign and Joly, 1986; Pagano et al., 1998). Also, the Exchange allows - it finance external growth without disbursement of cash. These are mainly payment by securities (Levasseur and Quintart, 1998; Brau and Fawcett, 2005). The IPO contributes significantly to
strengthening the reputation of the company and its bargaining power vis-à-vis its partners, customers, employees, suppliers, creditors ... Chemmanur and Yan (2004) refer to the introduction of marketing offering. The financial market, as we noted earlier, is also a tool for monitoring management and evaluation of their performance. Finally, the listing provides the liquidity of securities (Sentis, 2005). "The founding shareholders may emerge and new shareholders interest in society without fear of being trapped (Saada, 1996). This is rarely the case managers of SMEs with maintaining power is at the heart of their concerns (Belletante et al., 2001).

Despite these advantages, few French SMEs are listed. The IPO is rampant in a culture very hostile to the transparency and sharing of property (Chertok et al., 2009). Belletante et al. (2001) highlight the difficulties and fears about the economy, the size, the obligation of result, the constraints of maintaining the stock price, the high cost, loss of autonomy, under-reporting, the refusal to disclose information ... There are also fears of failure and lack of preparedness for this kind of exercise. These apprehensions have been reduced during the creation of the New Market (1996-2005) and the development of small innovative companies, the emergence of introducers market makers and more recently the introduction of "experts mean values" on Eurolist by Euronext. "The coincidence of a flurry of introductions and a more efficient support the stock market authorities and intermediate results in learning a logic that approximates the behavior of SMEs than large listed companies (Belletante et al., 2001). The comments raised by Belletante et al., 2001, we suggest thinking about the definition of SMEs and its apparent contradiction with the phenomenon of listing. Indeed, by slipping stock market, the SME opens its capital, change its ownership structure, changing its mode of governance, organizational architecture and strategic behavior. It seems to distort its specific characteristics closer to large enterprises. The current distortion based on a contingent approach to the specificity of SMEs. It aims to critically examine the context of validity of the
classical concept of MSY. It is justified in the research themes that address the paradoxical relation to the standards generally accepted in the SME. The demonstration of the distortion based on the concept of anti-SME. Torres (2002) defines it as "a small company that has all the opposite characteristics of the classical conception of SMEs ... In some kinds of anti-SME represents a large company miniature. The author believes that the demonstration of the distortion of the SMEs can not afford a single case. It would take a denaturing context. That is to say a context in which small companies have different characteristics from what is commonly accepted for SMEs. Taking the example of stock exchange, the natural context associated with the concept of SME is defined by a sample of small businesses not listed, is financing from own resources (internal and / or specific inputs), and possibly bank debt (Desroches, GREPME, 1994). The model-SME is a model of financial independence. In this regard, some studies have shown implicitly that the specificities of SMEs are significantly altered due to their mode of financing, such as the use of venture capital (Stephany, 1993) or public savings (Belletante and Desroches, 1994; Belletante et al., 2001). It would be interesting to study how the IPO could distort the specificities of the SMEs. The listing would change the environment of the SMEs (more heightened transparency, a more diversified ownership, more diffuse and especially more demanding, etc.) Encourage and conduct a different policy from that which would be adopted in the absence of context (Perhaps more offensive thrust toward growth, internationalization of markets, investment in R & D, financial openness to foreign funds, etc.). The purpose of this article is precisely to shed light on these presumptions.

Some interesting studies have been conducted on Canadian firms (Desroches and Jog, 1991) and French (Belletante and Desroches, 1993). They have to understand, among other things, the implications of the decision to IPO for SMEs. Overall, it shows an impact on attitudes and behavior of the leader, its management and financing, its network of financial
partners ... In short, a positive impact on the strategic management and growth prospects, "Access to finance public also seems to be a first step toward growth and maturity of the SME [...] It is clear that the experience of public funding appears to be very positive." (Desroches and Jog, 1991). Serve More recently (2007) conducted a study of 115 French companies, introduced the New Market between 1996 and 2000, and a control sample. It showed a decline in performance and lower growth indicators, including investment spending. Author (2006), by making a comparison longitudinal and transverse finds a statistically significant performance indicators. This trend is contrary to the sample "witness" of unlisted SMEs. He considers that the financial market reduced the discretionary latitude leader, certainly, but in a destructive sense of value.

2. **Empirical Approach: the Growth Strategies of Listed SMEs**

It stems from different theoretical approaches mentioned effect of listing on the growth strategies of SMEs. In what follows, we will try to validate (or not) our hypotheses empirically. This is to ensure that the stock market presence that offers advantages in terms of finance and strategic development potentially can actually create value and consistent with the specificities of SMEs.

2.1 **Methodology and other assumptions**

To provide some answers, we opted for a longitudinal study over a period of seven years (three years prior to the listing, the year of listing and three years later). The study focused on 65 SME and listed on a control sample of similar unlisted SMEs. For the constitution of our sample, we set an upper limit of 50 million euros at the date of IPO. Such a test is inadequate given the variety of industries to which firms belong. Careful attention was paid to each company, given its turnover, its staff, its total assets and business. The information gathered has been gathered from the database Dianne, CD-pro Dafsaliens and supplemented by annual reports available at the Documentation Centre of the MFA. It took place in two stages
corresponding to the two procedures based on the study of Alexandre and Charreaux (2004). The first step is mainly used to test the "evolution static" growth indicators selected. Just follow the evolution of the indicators on average, before / after listing (longitudinal comparison) and SMEs listed / unlisted SMEs (cross comparison). Parametric tests of difference of average have to see if the change is statistically significant. To better understand the temporal dynamics, further tests were performed on the values of the same indicators in the years between successive extremes -3 / +3 and -3 / 0 (pre-listing period) and, finally, 0 / +3 (The post-listing). Still, the dynamic effect of the quotation is perceived very imperfectly.

To overcome this deficiency, like Alexandre and Charreaux (2004), we felt it necessary to use an econometric model that allows us to take into account the temporal dynamics and whether the listing is a significant explanatory variable growth, ceteris paribus. This is to measure the growth rate per firm. For this, the main indicators were regressed on three variables: 1) the time T (the values of 1 to 7 denotes the seven years), this variable can take into account the effect of the doubt time and see if the rate growth has improved over the years, and 2) a dummy variable reflecting the L listing (equal to 1 if the company is listed, 0 otherwise): With this variable, we know a priori if the listing variable is significantly Explanatory growth, and 3) a variable equal to the product of TL variable "time" and the dummy variable "listing". This variable would give us an idea about the evolution of the growth strategy over the years after listing. Indeed, the consequences of the IPO are not instantaneous but they are spread over a longer period. Finally, to improve the quality of the model, two control variables were introduced: the size and the business cycle. The creation of a panel can control the heterogeneity that is often a source of statistical bias and identify the determinants of differences in observable behaviors. Given the two dimensions of data, the regression has increased from 455 observations (65 firms 7 years).
\[ Gr_{it} = \alpha_i + \beta_{1i} T_{it} + \beta_{2i} L_{it} + \beta_{3i} TL_{it} + \beta_{4i} Size_{it} + \beta_{5i} Cycle_{it} + \epsilon_{it} \]

Gr: the growth of the firm i in year t  

T: time for firm i (value ranging from 1 to 7)  

L: dummy variable taking the value of listing for year t listing of firm i, and 0 otherwise  

TL: variable expressing the interaction of the two previous  

Size: the turnover of firm i in year t  

Cycle: the rate of growth of GDP in year t for firm i  

\[ \epsilon_{it} \]: Error term  

Regarding the indicators of growth, we used indicators of growth in the strict sense: the internal growth and external growth. The first is the business model in the sense of heritage-In Montmorillon (1989): The company grows by acquiring new productive assets, approximated by the ratio (Fixed assets / total assets). The second is for equity or partial shareholding in other companies, have already combined factors of production, for control purposes (Paturel, 1992). We approximate this growth mode, like Alexandre and Charreau (2004), the ratio (financial assets / total assets). These two models of development, we added in addition, other indicators of growth: the rate of overall investment (net fixed assets / Total assets Net) growth of sales (St-St- 1/St-1) in France and abroad (rate of foreign sales) and the rate of investment in R & D (R & D / total assets).

We hypothesize that all of these indicators are expected to grow further in the context of quotation. We suppose like Desroches and Jog (1991) that "public financing is a step toward growth." As noted above, the listing improves access to financial resources (equity and long-term debt), it often requires the creation of a financial service (Belletante, 1998) which deal in particular operations investment. Also, the constraint of transparency and
accountability for results they would encourage the leader to opt for these promising strategies for positive signals. To avoid penalty Financial Market, the leader should be careful and put growth in the center of his thoughts for the development expected by the shareholders.

2.2. **Statistical comparisons: presentation and analysis of results**

Table 1 presents the results of tests of the first procedure for listed and unlisted SMEs. For each indicator, are listed the averages of the 65 companies surveyed in the year -3 (that is to say, the third year before entry), 0 (the year of introduction), 3 (third years after introduction) and the average of three years before and after listing. Subsequent columns show the average difference tests. These tests check whether the difference is significant or not.

In light of all the ratios of growth, the listing seems to have a statistically significant effect on the strategic behavior of SMEs in our sample, in terms of growth. The variations are insignificant at best, if not otherwise in the case of SMEs "cookies". The change in turnover is positive, which means an increase in turnover from one year to another. It is nevertheless true that he is at a decreasing rate, so the variation of turnover has decreased compared to the situation before listing. This decrease was significant on average before / after listing and third year after listing. The level of activity of the company seems to grow with a frantic pace after the IPO. The trend is not significant in the case of unlisted sample. That said, sales abroad increased significantly after listing. This evolution is far from being confirmed in the control sample. Probably because the listed company has more financial resources enable it to increase its market share abroad or in an effort to improve its image vis-à-vis investors and reflect future flourishing. The IPO also has a reputation and an additional guarantee for customers abroad. Alain Manoukian and justified the introduction of his company stock: ‘*We decided to enter the second market of the Bourse de Lyon because we needed an international reputation, particularly in the United States. Since, we are more than satisfied with relapsed.*"
Not only the title climbs, but many people contact us for licensing agreements ... This introduction has made us save years of expansion.\footnote{Cited by Daigne et Joly (1986)}

Regarding the ratios of growth in the strict sense, the quotation seems to have a significant effect on the investment policy of the company. In fact, its ratio of capital / total assets increased from -3 to +3, from 0-3 and averaged before and after listing. This trend is quite contrary in unlisted SMEs. The bulk of investments concern the external growth. The ratio of financial assets / total assets has continued to grow. However, investments in tangible and intangible assets (including research and development) have decreased significantly. Leaders, it seems, favor, after their IPO, the external growth strategies at the expense of growth.

This step has mainly helped us to monitor indicators of growth, on average, in a static view. But, we are not able to apply the rule of, all things being equal. Indeed, the differences, even significant, can not be systematically attributed to the phenomenon of listing. For this reason, the empirical study has been extended by an analysis that explains the impact of the listing for each company while introducing the variable "time" in a more dynamic perspective.

### 2.3 The econometric models for a better understanding of the temporal dynamics

Introducing the time variable is justified by the fact that it is unlikely that the effect of listing on growth strategies is immediate. Indeed, businesses, even small ones, are relatively rigid systems, high inertia. It takes time for new policy directions from the IPO are apparent. Thus, to better reflect the effect of listing, it would be interesting to measure the gradual evolution of selected indicators of growth (organic growth, acquisitions, growth in foreign sales, and investment in R & D). The procedure we can apply precisely measured for each
firm, the growth momentum due to listing and to verify whether the listing is a significant explanatory variable in growth ceteris paribus.

Table 2 presents a summary of the results obtained for organic growth. This is a linear regression on panel data on 455 observations (65 firms in seven years). The method that we considered most appropriate is that of weighted least squares, applied to the software Eviews.

Table 2 provides a sample of results for the 65 SMEs listed in our sample. For each company, we have estimated coefficients of explanatory variables and their degree of significance (t test). Like Alexandre and Charreaux (2004), we assume that the two control variables which would condition the growth strategies (the size and the business cycle) are common to all firms. In other words, the impact of these variables on the growth strategies of SMEs is the same for all firms. Here in this case, the effect size is negative and significant: the more the company is large lower is its investment in organic growth. Conversely, economic cycle is more favorable, more companies are internal growth. Finally, for each company we have estimates of the time variables and quotation. To better understand the contents of the table, take the example of the company No. 17 (Icom Informatique), a company for which all coefficients are statistically different from zero. The coefficient on the variable T is positive reflecting, on average, an increase in growth over the seven years studied. The coefficient of the variable L, also positive, means an increase of static indicator in the listing. Finally, the negative coefficient of TL means that the growth tends to decline over the years after listing.

The coefficient of the variable L gives information whether static sufficiently close to the parametric tests of difference of averages have provided. However, in this case, information is given company by company. It appears that the effect of listing on growth is positive for 28 out of 65 SMEs, but it is positive and significant for only 8 SMEs. The negative effect is more significant in 13 cases and 37 non-significant. The coefficients of TL
give information of dynamic nature. They are positive in 31 SMEs but are positive and significant in 18 cases. However, they are negative for the remaining 34 SMEs and negative and significant for 27 SMEs. This is consistent with the results obtained in the framework of the statistical study. Contrary to our assumptions, the growth does not seem to be preferred in a context of quotation.

The same model was applied to the external growth strategy. This indicates that the listing had a positive effect on the external growth strategy in 40 cases. This effect is positive and significant in 16 cases. However, negative factors are present at 13 cases and 12 cases insignificant significant. This confirms the results of the statistical study: the listing had a positive effect on the external growth strategy if we compare a static evolution of this ratio compared to the situation pre-listing (risk of error 1%) and in relation to unlisted SMEs. However, the most interesting factor is that which reflects the evolution of strategy over time after scoring in a more dynamic perspective. This is the coefficient TL. It is positive in 28 SMEs and significant in 12 cases against 24 negative coefficients and significant and 13 insignificant. The results are different from the statistical test. Apparently, most SMEs in our sample, drawn by the possibilities of acquisition of securities by exchange, recourse to external growth from their IPO. Subsequently, over time this strategy assumes. This is especially true that the shareholders having the opportunity to diversify their portfolio, by far the focus on profitability growth. Thus, we are tempted to temper the confirmation of this hypothesis: The listing had a positive effect on the external growth strategy in a static perspective. The trend reversed over time.

As regards investment in R & D, listing has had a positive effect in 13 cases out of 65. This positive effect is significant only for three cases. The negative effects are more prevalent in 52 cases (but not significant). As regards the coefficients of TL, they are positive for 48 SMEs with two significant. They are, however, negative and significant in 6 cases. The listing
seems to have a negative effect on the growth of investment in R & D this is confirmed in our statistical results. That said, we remain skeptical about the rejection of this hypothesis on a more distant future, as we move from 13 positive coefficients for the variable L to 48 variable TL, which means that there is probably a change in trend. Since its introduction, the leader of the SME does not promote the realization of such an investment is costly and that the payback period is very long. This would impact negatively on the immediate results of the company and its stock offering. However, beyond three years of listing, management does not preclude the realization of such an investment often conducive to improved performance.

Finally, about the percentage of sales abroad, we found a positive effect of listing in 24 out of 65 SMEs. This effect is significant only in 5 cases. It is, however, negative for 43 SMEs with 13 significant cases. The static effect of listing on the percentage of exports seems rather negative. This is in contradiction with the statistical results that confirm a positive trend in this ratio on average. Certainly, because if we take each company in each case, we see more negative effects of listing on the percentage of internationalization. However, these effects have had a low weight as the average export rate has increased significantly. As for the dynamic effect of listing on this strategy, it is positive in 37 cases including 23 significant and negative in 28 cases including 13 significant. These results lead us to accept the hypothesis which states that the listing seems to have a positive effect on growth of sales abroad, especially in a dynamic perspective.

Discussion/Conclusion

Following this study, what can we conclude about the impact of the IPO on the growth strategies of SMEs and the distortion of the concept SMEs?

The general conclusion of statistical comparisons and econometric models summarized a significant impact on growth indicators. The listing has indeed had an impact on the strategic behavior, in terms of growth. This impact is not always positive. The listing
does not automatically mean growth for all selected indicators and for all SMEs in our sample. The general trend that emerges is an increase in investment for the bulk of which external growth at the expense of growth and investment in R & D. The growth in turnover is positive but it shows a decreasing rate. Its share abroad increases significantly, especially in a context of temporal dynamics.

These behavioral changes brought on strategic external growth and internationalization, coupled with financial openness from SMEs to public savings, are in line with our presumption of distortion. Indeed, the current stock market and growth strategies resulting dissolve the specificities of SMEs and switch the definition of SMEs in the extreme and beyond continuum proposed by Julien (1994) size increases, the market is open to international perspective, the structure is decentralized, financial independence is meaningless, growth is pushed toward more risk and technology tends to be developed ... As such, it is closer to the profile of SMEs GAS (growth / autonomy / sustainability) as SIG (sustainability / independence / growth) as defined by Julien and Marchesnay (1987), "risk" to distort and to shake up the boundaries that specify big business.

That said, the study is not without limits, we agree that the horizon is very short selected to evaluate the effect of listing on the strategic behavior of leaders, particularly in terms of growth. The apprehension of the temporal dynamics has been achieved through the econometric model. The latter along with the statistical approach is not free from criticism. Similarly, the accounting indicators of growth are only a rough approximation of the complex reality of the concept.

It seems, well, that to better understand the effects of listing on the growth of SMEs, it may be necessary in connection with the extension of this research, use of qualitative studies. Such studies would probably a better understanding of listing and its impact in organizational and strategic. This would also allow us to deepen the criteria for definition of anti-SME when
speaking of listed SMEs. Finally, it would have been interesting to study the impact of new strategic directions from the listing on the creation or (destruction) of value to SMEs. The purpose of this study is, rightly, a prerequisite to better understand and explain the evolution of the performance of listed SMEs. It is likely that the decline in performance often found after listing due to a growth strategy inconsistent with the logic of SMEs under pressure and "short-term approach" imposed by the financial market. The purpose of this study is also based on the reflection on the concept and its small distortion after the IPO. A small public company is not necessarily an SME if it adopts a strategic management, particularly in terms of growth, which removes the commonly accepted characteristics of SMEs. Should we push the limits of the definition of SMEs? Or look at the other extreme, the SMEs when it enters the stock market is no longer an SME?

Bibliography


Table 1: Testing the effect of listing on the various indicators of growth for SMEs
listed and unlisted (longitudinal and transverse comparisons)

<table>
<thead>
<tr>
<th>Indicators for listed SMEs</th>
<th>Mean at -3</th>
<th>Mean before</th>
<th>Mean at 0</th>
<th>Mean after</th>
<th>Mean at +3</th>
<th>test before/after</th>
<th>test -3/+3</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>St - S t-1 / St-1</td>
<td>0.95</td>
<td>0.54</td>
<td>0.19</td>
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<td>-1.58</td>
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<tr>
<td>% of abroad turnover</td>
<td>19.11</td>
<td>21.56</td>
<td>22.25</td>
<td>23.54</td>
<td>27.27</td>
<td>0.82</td>
<td>2.72***</td>
<td>1.36</td>
<td>2.58***</td>
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<td>Ratios of investissement (en %)</td>
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<td>Total Investment rate</td>
<td>26.68</td>
<td>25.59</td>
<td>25.25</td>
<td>31.91</td>
<td>33.85</td>
<td>3.18***</td>
<td>2.82***</td>
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<td>5.92***</td>
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<td>58.4</td>
<td>47.18</td>
<td>38.21</td>
<td>34.57</td>
<td>-6.73***</td>
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<td>1.01</td>
<td>0.98</td>
<td>-1.78*</td>
<td>-1.25</td>
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<table>
<thead>
<tr>
<th>Indicators for listed SMEs</th>
<th>Mean at -3</th>
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<td>0.66*</td>
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* Test rejecting the null hypothesis of the equality of means 10% (** at 5%) (*** 1%)
Table 2: Extract the test of the dynamic effect of listing on the strategy of organic growth (IG)

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<th>Variable</th>
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Weighted Statistics

- R-squared: 0.983
- Adjusted R-squared: 0.970
- S.E. of regression: 0.139
- S.E. of regression: 4.890
- F-statistic: 74.903
- Durbin-Watson stat: 2.132

Unweighted Statistics

- R-squared: 0.902
- Durbin-Watson stat: 1.989
- Adjusted R-squared: 0.826
- S.E. of regression: 0.142

***/**/* Coefficient significantly different from zero at 1% (5% / 10%) risk of error
**Fostering Trust Within Strategic Alliances Among SMEs:**
*A Study on the Role of Network Facilitator*

*Benedetto Cannatelli and Fabio Antoldi*

**Abstract**

The paper describes how the role of network facilitator played by a third party institution may substantially contribute to enhance trust-based ties among the entrepreneurs involved in a local business network, thus reinforcing a sound alliance strategy initially based only on calculativeness about a business opportunity. In our work, empirical evidence is presented by a longitudinal analysis of a case history. The case study focuses on eight international-oriented competitors located in the furniture industrial district of Brianza, a geographical region in Northern Italy, that built up a formal network called "I-Style Partners" to foster beneficial associations with one another. Two series of in-depth interviews were carried out with entrepreneurs and facilitator’s managers involved in the strategic alliance during a three-year period.

In this case analysis, a descriptive framework of the impact exerted in the network by the interaction of calculativeness and trust will be provided. Findings from this research show that interaction with an external actor has been crucial to promote the formation of linkages, to develop trust and to solve relational problems among competitors in an individualistic and masculine environment.

Keywords: Strategic alliance, SMEs, Trust, Calculativeness, Network facilitator

**Introduction: strategic alliances among SMEs as a form of network**

Strategic alliances among firms have been gaining increased attention among scholars as an innovative way to improve competitiveness (Ahuja, 2000). Indeed, by building inter-organizational relationships, firms achieve new competitive advantages that contribute to their ability to reach a better position in the market. This is especially true now that globalization has pushed businesses toward new strategies by reducing the distance between demand and supply abroad. Therefore, alliances have to be regarded as a critical pattern that firms may well be involved in, so as to better cope with new challenges coming from the external environment.

The strategic implications for single firms participating in such an alliance are mainly: lower transaction costs in the supply chain; easier creation of intellectual capital, especially in the form of...
tacit knowledge; as well as the facilitation of learning and knowledge transfer (Jarrillo 1988; Nahapiet, and Ghoshal 1998; Inkpen, and Tsang 2005).

Strategic alliances often involve several economic actors whom, cooperating long-term, may also generate stable networks of firms. “These strategic networks are composed of interorganizational ties that are enduring, are of strategic significance for the firms entering them, and include strategic alliances, joint ventures, long-term buyer-supplier partnership and host of similar ties” (Gulati, Nohria, and Zaheer 2000).

Firms may gain substantial advantages from belonging to one or more networks. Indeed, the special presence, evolution and interaction of social capital (and intellectual capital) inside the network generate an additional “organizational advantage” that is based both on the inter-firms relations and on the continuous transference of knowledge among its members. For these reasons, particularly in favourable contexts, network member firms are able to generate greater value as compared to those that operate according to other modes of organization, such as market or hierarchy (Adler, and Kwon 2002; Ghoshal, and Moran 1996).

All of these advantages are even more considerable for Small to Medium size Enterprises (SMEs), which often do not handle enough resources and capabilities to achieve their critical goals in large international markets. In fact, through strategic alliances, small firms can fill an often otherwise overwhelming gap by gaining access to such particular resources, thereby better developing economies of scale, sharing risks and costs, entering foreign markets and improving their speed of entry into the market (Rosenfield 1996; Doz, and Hamel 1998; Bierly III, and Gallagher 2007).

The role of trust in building strategic alliances

Even though joining a strategic alliance may well offer several advantages for SMEs, the process toward collaboration is not always smooth. Indeed, collaboration among small firms predominantly implies collaboration among entrepreneurs; such people are often individualistic (and sometimes masculine) profile. Due to the high probability of conflict among the people involved, managing strategic alliances among SMEs is a complex and risky venture (Medcof 1997).
According to the literature concerning networks of firms, the main constraints to the creation of a strategic alliance are related to: (a) the risk of opportunism among the entrepreneurs, (b) a low commitment from the counterpart and (c) the culture of the actors joining an alliance.

The risk of opportunism comes from the divergence of objectives and in the management style of the firms involved as well as from environmental volatility. Williamson defined it as “self-interest seeking with guile.” Opportunism improves the complexity of the alliance building process by increasing the transaction costs, reducing confidence levels among the participants, and by focusing on short-term rather than long-term interest, thus discouraging reciprocity and repeated commitment (Williamson 1975; Parkhe 1998; Luo 2002).

A high level of commitment is necessary for a successful strategy in a firm as well as in a strategic alliance. According to Salancik (1977) commitment is the binding of the individual to behavioural acts and Ghemawat (1991) defines it as the tendency toward the persistence of a firm’s strategy, underlining its relevance in order to produce a superior performance. On the contrary, alliances characterized by low commitment of its members - due to relevant differences in their self interests, business characteristics and market strategies – may end in divorce due to substantial differences in the amount of time and the number of resources devoted by each of them (Medcof 1997).

Lastly, the individual culture of the entrepreneurs joining the alliance plays an important role in determining their attitude to take part in the collective strategies. Hofstede defines culture as “the collective programming of the mind which distinguishes the members of one human group from another.” (Hofstede 2001; Doney, Cannon, and Mullen 1998). Accordingly, masculine and individualistic cultures tend to stand as a barrier to the consideration of a competitor as a potential partner, while feminine and collective cultures seem to be correlated to cooperation.

Notwithstanding the above mentioned constraints, strategic alliances may be supported and fostered by the development of trust among the partners (Ring, and Van de Ven 1992; Zaheer, and Harris 2006).

The topic of trust has been widely observed from several points of view, corresponding to as many disciplines as psychology, sociology and economics. With regard to the latter, in the last two
decades, a growing amount of attention has been paid to the subject of trust among actors within the same and among different organizations (Zaheer, and Harris 2006; Dirks, and Ferrin 2001; Saparito, Chen, and Sapienza 2004; Zaheer, McEvily, and Perrone 1998, Krishnan, Martin, and Noorderhaven 2006). Precious insights on trust have been offered to the fields of Strategic, Organizational and Inter-organizational Management.

In management literature, several issues concerning trust have been taken into account. A milestone paper by Zaheer, McEvily and Perrone (1998) defined trust as “the expectation that an actor can be relied on to fulfil obligations, will behave in a predictable manner, and will act and negotiate fairly when the possibility for opportunism is present.” Their research highlights the need to distinguish between interpersonal and interorganizational trust. The individual boundary spanner at a single firm establishes relationships with both individuals and groups of individuals that belong to the partner organization. Hence, if the origin of the relationship is always an individual, the counterpart may vary. This insight is very useful in order to avoid making the cross level fallacy (Russeau 1985), for one will then distinguish between these two levels of analysis. This insight has been of great value, especially in examining the relationships among SMEs, that, because of their entrepreneurial nature, are prone to an overlap of interpersonal and interorganizational ties.

According to this approach, trust among partners has a relevant impact on the respective firm’s performance by reducing transaction costs and conflicts. In fact, even other benefits, such as increased sales and an increased return on investment, are to be listed as direct outcomes of trust (Zaheer, and Harris 2006; Mohr, and Spekman 1994; Luo 2002).

Literature acknowledges trust to be a requirement of a strategic alliance. The main purpose of our work is to analyse how trust emerges over time, during the network building and developing process, as result of both network facilitator activities and interactions among entrepreneurs.

**Calculativeness and trust in the strategic alliance building process**

Before analysing the emergence of trust within the network, it is necessary to introduce the topic of rationality and its role in leading entrepreneurs to the decision whether to join an alliance or not.
To broaden this topic, it is useful to refer to the debate about the relationship between calculativeness (which usually focuses on the economical returns of a decision) and trust (which conversely focuses more on psychological and social dimensions of behaviour). Different statements have been made about the relationship that occurs between the two paradigms, especially when referring to the matters associated to having an alliance. On one side, some authors consider calculativeness as a component of the trust-building process among the economic actors, hence including the economic expediency of an alliance as an ingredient of trust (Doney, Cannon, and Mullen 1998; Zaheer, and Venkatraman 1995, Luo 2002).

Conversely, according to Williamson (1993), calculativeness is the only paradigm that is in a position to explain economic behaviour, asserting that trust “is reserved for very special relations between family, friends and lovers”. Hence, he goes on to state that “calculative trust is a contradiction in terms”. Such a position has been strongly objected to by Craswell (1993), who substantively disagrees with Williamson’s work by distinguishing between a possible explanation paradigm for the economic behavior (calculativeness) and the cognitive process that really leads to that behaviour (trust). In other words, Craswell introduces a “distinction between the internal psychology of the actors involved and the external or «as if» theories of an academic analyst,” by supporting an explanandum approach that cares about how the actors involved in the analysis view their actions. In so doing, he thus holds trust to be a key factor of economic behavior. Like Williamson, Craswell considers calculativeness and trust to be two separate concepts. However, he does diverge from the former in conceiving the two paradigms as complements rather than substitutes.

Such considerations lead to the first research question of this work:

Q1. What are the roles played over time by calculativeness and trust in the strategic alliance building process among SMEs?

Accordingly, the perspective assumed in this work considers trust and calculativeness to be different but complementary concepts. In so doing, this leaves the door open to a decision making process in which calculative, psychological and sociological elements coexist.
The role of network facilitators in fostering trust among members

The second purpose of this research is to deepen the body of knowledge about network facilitators, a concept introduced in work by McEvily and Zaheer (2004) to analyze the role of institutions (such as associations of firms) in fostering collaboration among actors involved in geographical industrial networks. In particular, with the acceptation of “Architects of Trust,” these authors focused on the dynamic through which trust is built among people belonging to geographically close organizations involved in the alliance. They proposed the performance of an exploratory in-depth case study on the activities led by an institution called Western Michigan Manufacturing Technology Center (WMMTC) so as to foster trust within a network called the Office Furniture Industry Council (OFIC). The main result of their study has been a better understanding of the importance of the presence of a third party that is trusted by each participant due to the presence of a pre-existing relationship.

Even if it has been observed that network facilitators play a relevant role in building trust among participants (Obstfeld 2005), the dynamic according to which this occurs is still unclear, especially from a longitudinal perspective. Thus, in regard to the invitation by Zaheer and Harris (2006) to better analyze the role of the network facilitator, the second research question of the paper is stated as follows:

Q2. How do network facilitators foster the development of trust among members of a strategic alliance over time?

Methodology of the research

The research performed here is a longitudinal case study with an exploratory purpose. The field case analysis carried out focuses on the I-Style Partners experience, a strategic alliance among eight firms belonging to the industrial furniture district of Brianza, a geographical area in Northern Italy. These firms are: Feg-Salvarani Group, Lema (through its business unit, called “Concept International Office”), Mobileffe, Misuraemme, Giellesse, Turri, Zanaboni and Coro. They are all SMEs: their number of employees ranges from 20 to a maximum of 200. It is important to note that they all
belong to the same local association of firms, Compagnia delle Opere (CdO), which acts as network facilitator in the case history.

To lead an in-depth case study fits the purpose to explore causal links that are too complex to be analysed, for example, through a survey. Indeed, the utilization of a longitudinal perspective is consistent with the research objective: explore the dynamics according to trust is created and maintained among a group of entrepreneurs, as well as the call for research to explain the evolution of such trust over time (Zaheer, McEvily, and Perrone 1998). Again, it is also a key-tool to detect the influence exerted by the network facilitator over the different stages of the alliance.

Narrative has been used as basic tool for analysis: this is consistent with both the need to re-enact main events of the case history and to describe motivations and actions carried out by different actors along the process.

The validity of the construct is enhanced by triangulation among multiple sources of evidence: a couple of in-depth interviews with each entrepreneur and manager of the CdO – registered and transcribed, backed up by a systematic review by the interviewee, then codified by the authors – over a period of two years (see Table 1); analysis of corporate documents; direct observations attained during the alliance meetings. Some extracts of the interviews are reported and commented on in the following paragraphs.

A clear statement of the variables considered in the analysis section gives both internal and external validity to the theoretical model proposed. Finally, research practices compliance is strengthened by the adoption of a case study protocol as well as the creation of a database that reports all documents and interviews that qualify as research data.

**I-Style Partners and the Brianza Furniture District**

The furniture district of Brianza is composed of 4,476 independent enterprises, all specializing in the production of furniture, co-located within an area of 258 Km² in the Lombardy Region. In reference to the number of employees, the average size of the firms is only 3.6 units. Indeed, this is the result of the co-existence of enterprises that differ among each other. In fact, three classes of
SMEs can be found in the region: the micro-firms, with no more than 9 employees (they work mainly as sub contractors for other manufacture in the district); the small enterprises, with 10-49 employees (they work both as sub contractor or directly for the wholesale dealers or retailers); medium enterprises, with 50-249 employees, with focus on the market, subcontract for several stages of the supply chain to smaller enterprises in the district. Only a small number of firms inside the district has more than 250 employees (fewer than 10) and none of them has more than 400.

The initial proposal of gathering the eight entrepreneurs was made in the spring of 2005 by the local office of Compagnia delle Opere (CdO) – an association of firms with branches all over Italy and in fourteen other countries. Two weeks before, CdO was involved in a large real estate redevelopment project in Ivory Coast. CdO asked for a collaboration to occur among the eight associated firms. In Table 2 the eight firms involved in the I-Style Partners alliance are depicted.

The process of forming the group has been a progressive effort. Only three firms were involved at the outset: Lema, Mobileffe and Giellesse. They mainly deal with modern, day, and night furnishings and, thanks to Concept (a Lema’s business unit) they could assure the coverage of all possible office furnishing needs. The fourth firm asked to collaborate was Turri, the only one with the expertise to produce furniture with a classic style, which is especially appreciated abroad. Then, production volume and the investment budget was estimated, and the need to call on additional firms within the district became evident. In order to avoid product overlap within the group, the selection process had to be accurate. That was when another business, Feg-Salvarani Group, was invited to join the alliance. In fact, with the aid of the Salvarani unit, the group also would have been able to satisfy the demand for kitchens. Finally, Zanaboni, Misuraemme and Coro were added to the strategic alliance so as to increase the productive capacity for classical, modern and garden furnishings.

The following step, in 2006, was to establish a temporary association of firms in order to create a single juridical institution to interact with the Ivory Coast purchaser.

After almost two years of slow but fruitful process of start-up, in early 2007 the original project suddenly seemed to fail because the furniture orders vanished for a series of financial and legal problems of the purchaser.
Notwithstanding the stop, CdO still had the willingness to hold on to everything that had been built in the previous months among the entrepreneurs. CdO’s idea was to push the “entrepreneurs’ table” (they used to call themselves this way) toward the sharing of a strategic solution, which would have led to a brand value increase in new markets such as the Far East and South America.

In addition to the need for a strategic repositioning in new markets, a structure targeting the contract segment of the furniture industry, which had not been present within the firms involved, was needed. With this structure, the relationships built over two years of collaboration would not be lost with the dissolution of the original project. Facing these arguments from the CdO, all members of the “entrepreneurs’ table” agreed to continue the path they were following a few weeks before; they agreed to a formal strategic alliance within the SMEs. All of the enterprises joined forces and presented themselves “under the same roof” at an international trade fair in 2008.

In May 2008, all eight of the entrepreneurs further committed themselves and employed a full time manager to lead the business of the alliance. The shared mission regarded the collaboration in the contract segment in foreign countries, with a particular focus on India, Russia, the US and the main tourist regions abroad.

Their first target was a deal with Ventaglio Real Estate for the furnishings of one hundred and twenty apartments and one hundred and twenty hotel rooms in Rosa de Bayahibe in the Dominican Republic, a thirty-five million Euro business deal.

A longitudinal analysis of the alliance evolution

The starting point: calculativeness for capturing a business opportunity – At the very beginning of the story, the arrival of a substantial international project could have been considered the first step toward the constitution of the I-Style Partners alliance. The project advanced by CdO was so vast, however, that no firm within the district could take it on alone. Thus, given the difficulty of sustaining such a project, it was not been considered a real opportunity by any of the district’s firms acting alone.
Instead, the opportunity became a realistic possibility once the hypothesis of collaboration was considered. By cooperating, all allied enterprises would share their production capacity in order to reach the volume needed to supply a furniture order for 5,000 country-houses in the Ivory Coast.

By filling the prior production capacity gap through this alliance, the Brianza furniture district enterprises would have a great advantage in competing for the contract due to its high product quality, Made in Italy design, the firms’ experience and the district’s reputation amongst industry operators.

Moreover, CdO was aware of the fact that a “yes” to their offer would not be easily attained due to an entrepreneurial culture that was quite masculine and individualistic, and that, in the past, has pushed such companies away from collaborations with their competitors. In fact, while from a “macro” point of view the Brianza territory must truly be considered a district (firms are strictly connected by both vertical and horizontal linkages), from a “micro” point of view (the entrepreneurs’ point of view) it cannot be said that collaboration is thought of as being part of the development pattern. Thus, these entrepreneurs describe themselves in the following manner:

«... we are in Brianza, where it is very hard to collaborate. The typical behavior among us is well described by the sentence “Your loss, my gain”. Collaboration among competitors is completely absent. On the contrary, we are very reluctant to seek it. The success of an enterprise is strictly related to the failure of its competitors. The saturation of the market and the consequent reduction of profits in the last years has contributed to the development of such a situation».

This paradox made it even more difficult to find a common point of contact among the entrepreneurs when faced with this sudden and unexpected business opportunity:

«The project was so huge that no one of us would have been able to cope with it on his own. This opportunity was almost incredible. It would have provided business for all of whole Brianza for the following five years...Indeed, when the numbers allow everybody to make their profit, it is much easier to find an agreement... while, in the usual market in which every one competes for a larger market share it is much harder».

In this first stage of the alliance lifecycle, the cohesive factor and the engine of such an entrepreneurial initiative are born from a decision making process characterized by a calculativeness that spawns its effect by evaluating the means available (the production capacity level) in order to
achieve economically quantifiable goals (profit). According to this perspective, and taking into account a culture that is not oriented toward inter-firm collaboration, this alliance is viewed exclusively as an essential step needed to achieve an otherwise unattainable goal. Once again, calculativeness prevails.

The selection of the enterprises was the next step. CdO provided the opportunity and, therefore, had the power to choose one enterprise rather than another. The main issue was that of identifying, amongst the associated firms, those that were best able to synthesize their features in regard to both product range and organization.

For this reason, the eight enterprises in this district were progressively asked to join the “entrepreneurs’ table” with the objective of grouping enough resources together so as to assure the coverage of the required production volumes according to a rational objective logic of “complementarity” with respect to the production needs.

The emergence of trust among the entrepreneurs – Consequently, it is clear that the selection process had to take place according to the criteria of the single enterprise’s operative features. At the same time, CdO – considered the alliance’s “playmaker” at the time - could not ignore the importance of building trust among the single actors involved. Indeed, it was found that trust is an essential factor within alliances, one that can assure cohesion within groups of people where different individual objectives (that possibly run against each other) are present.

Thus, CdO’s presence was fundamental because it played a two-fold role: firstly, due to its trusted relationship with the single entrepreneurs, all of the partners considered it to be the warrantor; secondly, because of its singular non-competitor position in the group, it was supposed to be the project playmaker. One entrepreneur explained this particular role of CdO quite well in saying:

«The presence of a playmaker not involved in the industry, and thus supposedly impartial, is clearly a benefit because of his “super partes” status. It demonstrated its fairness by supporting many of us for many years. Trusted relationships like this are tried in such circumstances. These are relationships that cannot be created in a few weeks. The role that the CdO is playing is fully reliable and is the result of years of collaboration».
Therefore, in the beginning, there were no direct, trusted relationships among the entrepreneurs. Rather, a sort of “mediated trust” supported by CdO developed. The presence of an established goal, as well as a sort of guarantee of the behaviour of the strategic partners, seemed to be, according to several entrepreneurs, the main difference compared to their previous experiences within local export consortia among SMEs. According to the entrepreneurs the experiences in such consortia were unsatisfactory:

«After ten meetings everybody is in agreement; then, when the moment of signature of the constitution arrives, everybody takes a step back» and «there is no familiarity... which is present in a smaller group, where the goals are concrete and clear, and everybody is committed to achieving “that goal”. In missions like the first, concrete goals are absent and the number of participants is too big to work well. Export consortia have never been very useful for us».

The need to share an established market goal, instead of a less defined collective strategy, is underlined by the entrepreneurs’ choice of setting up a temporary firms association, which ceases to exist once the goal has been achieved.

The passage toward relational trust – In the first months of 2007, however, all of the essential requirements of the alliance seemed to collapse along with the failure of the Ivory Coast deal. Indeed, along with this came the disappearance of “the cake,” the main goal behind the beginning of the collaboration. The opportunity for profit was the market goal around which a market logic had been developed, and was considered by each entrepreneur as the engine of the initiative.

However, the disappearance of a foundation of strict economic rationality did not keep the collaboration – originated only one year before – from continuing in a new dimension. This third stage of the case is well described by the image of the phoenix: the mythological bird that revives from its ashes. That is practically what happened to the I-Style Partners.

The idea that, notwithstanding the original goal’s failure, a path for a strategic alliance was still practical, was strongly brought forward by the CdO:

«... for us, who promoted and supported such a meeting in neutral territory – CdO headquarters – it seem a pity not to persist in the same direction with a broader perspective». 
Facilitating a meeting among competitors under the protection of a neutral environment allowed new evaluation criteria to enter the players’ decision processes. Such criteria, implicitly present in the district’s experience in vertical relationships, are trust, identification with the territory, and a special industrial atmosphere («the Brianza furniture ... has a quality that no other will ever attain. Our product breathes our air, which is different»). These features permitted a shift from means/goals-based relationships to those where logic coexists with ethical, relational and social premises. Indeed, from the first months of collaboration, the owners of the eight enterprises have had possibilities for confrontation on different issues, such as supply processes within the district, human resource formation, or the best trade fairs:

«...know-how began to flow, without any of the enterprises loosing its own identity or being robbed of its ideas. In this way, by discussing issues concerning our industry rather than regarding a single enterprise, it allowed the facing of these issues together. This is one of the benefits that we got just by sitting around the same table».

In this way, relationships among entrepreneurs started to develop beyond the single project - still the shared goal – thus strengthening the development of social capital within the alliance. In order to keep the latter alive, it was necessary to identify a new paradigm that would promote a new form of collaboration:

«By working with this group of firms, by letting a new way of doing business emerge – completely different from our traditional approach – by collaborating, we have introduced a new work conceptualisation in Brianza. To have the opportunity of entering a competitor’s firm was impossible until recently. Now we are tuned on a “your life, my life” philosophy. Thanks to the confrontation I see that, even though we naturally are still competitors, there is an exchange of information that is very important».

By extending the collaborative view to a longer time-frame and focusing on international markets («The only way to stay alive is to sell abroad. Enterprises that did not do so, are now closed»), significant quality and high flexibility can be achieved at the same time:

«It is like having a very flexible enterprise that can shift from classical to modern furniture assuring expertise and quality. It would be impossible for a single firm». 
The cultural impact of this collaborative experience enabled the CdO to change its role within the alliance. Indeed, since the unifying element among firms became a collective strategy, and since there are direct relationships of trust among entrepreneurs – instead of the aforementioned “mediated trust” – the CdO has partially and voluntarily kept a lower profile by shifting the handling of the alliance over to the firms. Yet the CdO remains present in its role of supporting the association.

The first official step in the direction of an alliance occurred with the participation in Matching 2006, a trade fair event that the eight firms attended as a single business group. This was an important sign in terms of how the entrepreneurs were increasingly conceiving their alliance in accordance with the logic of collective social action:

«The aim, here in Brianza, where there are incredible jealousies, is to manage this (the alliance): a very important challenge, beyond what any of us could have imagined.»

Greater group identification has opened the door to several economic benefits coming from this collaboration, such as a constitution of supply agreements («Collaboration gives us more power in purchasing raw materials by exploiting economies of scale»), cost and risk reduction through shared marketing investments, and the penetration of several markets as I-Style Partners. Indeed, such agreements allow firms to work together in international markets for contract orders, while still respecting the individuality of each firm in the Italian market:

«Every firm has to share its knowledge, while keeping its own features and identity, for something more.»

**Theoretical and managerial implications**

The case of I-Style Partners can be viewed as an interesting tool for understanding the development dynamics of trust and calculativeness within a strategic alliance among SMEs, especially in contexts in which the entrepreneurial culture is not prone to such inter-organizational collaboration. Accordingly to the scope of this study, culture has not be considered as a macro-feature of the whole context in which the I-Style Partners operate (i.e. the district of Brianza). Rather, by relying on interviews with each actor, Hofstede’s metrics of culture (individualism and
masculinity) are used here as a framework to assess entrepreneurs’ personal attitudes toward alliance building.

Consistent with the exploratory purpose of the case history, some implications may be formulated, both at theoretical and managerial level.

More specifically, with respect to the first research question (“What are the roles played over time by calculativeness and trust in the strategic alliance building process among SMEs?”), several issues emerge as fresh insights to be added to the literature.

Firstly, as hypothesized, calculativeness and trust result in becoming complementary categories of rationality, rather than simply alternatives. Notwithstanding, it appears that – in a scenario characterized by a small number of firms that are (a) potential competitors (although in different but very close segments), (b) geographically close and (c) of small–to-medium size, where a masculine and individualistic culture prevails – stages branded by just one category of rationality may occur, as seen in the first stage of the I-Style Partners case.

Figure 1 presents a three-stage model that summarizes what happens in the I-style case history and – more generally – describes the evolutionary pattern of such an alliance. It includes four elements of analysis: (a) the extension of the time perspective adopted by partners in building their alliance; (b) the main cohesive factor that links partners in different moments of their collaboration; (c) the strategic objective of the alliance; (d) the functions played by the network facilitator in different stages.

The starting point in the first stage of the model is the presence of a cohesive factor among partners which, in the I-Style Partners case study, consists of the initial market opportunity. The main feature of this factor is that it must be “catalysing.” Thanks to its extraordinary nature, it is therefore able to attract potential members to the alliance. According to the calculativeness paradigm cited above, such a decision (to start cooperation) is considered a product of the calculative process that measures the convenience of an action by comparing goals and resources. Hence, in the early stage, the objective of the cooperation is a business opportunity.
In the second stage, the activities required by the common project (such as meetings to assess the production capacity within the network) bridge relationships among members, and knowledge (i.e. information about suppliers) begin to flow, even if in an informal way. According to Anderson and Narus, who found cooperation to be an antecedent of trust, such relationship changes, overcoming the original ground of cooperation (the cohesive factor), move toward an embryonic form of trust that is still mediated by the network facilitator.

Finally, in the third stage, a personal assessment by each entrepreneur of the level of convenience (both economic and social) coming from the alliance emerges. This judgment is helpful in order to strengthen the relationships and to facilitate the development of trust among members, i.e., the need to feel as part of a group is proven by the signs of identification that start to develop. In the case of the I-Style Partners, the signs are about belonging to the same territory and, in particular, to the same industrial district. This is consistent with Morgan and Hunt (1994) and Young-Ybarra and Wieserma (1999), who found a positive relation between shared group values and trust. At this point, the path from a fully calculative to a relational trust approach (which, it is important to note, does not abstract from assessment of economic convenience), reaches its maturity. Here, evidence of the co-presence of both calculativeness and relational trust in the third stage support the hypothesis that these dimensions are not alternatives, as stated above.

Another finding of this work is the correlation that emerges among (a) the stage of the alliance, (b) the dimension of rationality and (c) the time perspective adopted by members. It appears that the early stages of the network creation are strictly connected to a calculative approach that is likely related to the awareness of each entrepreneur of the risk of opportunistic behaviour by the other members. The fear of opportunistic behaviour by potential partners emerged in literature as being an important obstacle in alliance formation, especially in the partner selection task (Holmberg, and Cummings 2009). Here, an important variable that influences this relation is the entrepreneurial culture, which, in the I-Style Partners case, is the same for all of the entrepreneurs. The need for a cohesive factor based on calculativeness seems to be more critical here than in a context – less masculine and individualistic – in which cooperation is seen as a viable and natural pattern to
develop entrepreneurial activities. Accordingly, the first stage of the case study is characterized by a short-term collaboration perspective. This is explainable if related to the time needed for the goal of the collaboration to be achieved.

This paradigm is also supported by the later stages when a switch in the rational approach to the network and entrepreneurs’ personal assessment of the convenience (not just economic, but even social) of the alliance leads the time perspective to evolve in the “long-run”. This finding is consistent with Rousseau et al. (1998), according to whom “repeated cycles of exchange, risk taking, and successful fulfilment of expectations strengthen the willingness of trusting parties to rely upon each other and expand the resources brought into the exchange… These expanded resources can, in turn, give rise to a psychological identity”.

Significant managerial implications emerge with regard to the second research question, which investigates the role played by the network facilitator in fostering trust among the alliance members. Consistent with the aim of this research, it is important to focus on two features related to the role of the network facilitator within a strategic alliance: (a) the position assumed and (b) the activities lead by such institution in each of the three stages of the network creation.

The most critical characteristic of the network facilitator that emerges in the first stage of the alliance is its pivotal position. This can be seen as a consequence of three facts:

1. The network facilitator is the actor that keeps control over the cohesive factor (market opportunity);
2. It is the only actor within the network that has a tie with each member;
3. The network facilitator is seen as trustworthy to each entrepreneur because of its neutrality and history of social contact, which confirms previous findings (Larson 1992; Poppo, Zhou, and Zenger 2003).

As illustrated in Figure 2, by virtue of the dyadic relationships that it holds with each entrepreneur and the contemporary absence of ties with other members, the position of the network facilitator in the first stage is pivotal. In this early stage the contribution of the network facilitator, in terms of activities, is to:
• identify the business opportunity;
• rationalize the business opportunity, making it accessible for the firms;
• design the framework for cooperation;
• coordinate activities (as the pivot of the alliance), and keep the cohesive factor achievable.

In the second stage, because of the trust relationships that exist between it and the members, the position of network facilitator remains central, even if they cease to be exclusive: i.e., loose ties between firms begin to take shape. However, as the warrantor of entrepreneurs’ behaviour with other members, the presence of the network facilitator is still critical, and its role could be defined as mediator. The activities led here are mainly oriented toward the facilitation of the germination of relationships among members, making the dialogue among them as smooth as possible:

• to summon meetings;
• to assure equilibrium in the workloads;
• to give input toward a new perspective of the alliance.

In the last stage trustworthiness among members reaches its maturity: ties are strengthened from the knowledge transfer and common experiences gained during the previous years. Hence, the need of a warrantor gradually decreases, as each entrepreneur freely decides to trust other members of the alliance. As such, the network will no longer need an internal facilitator. Rather, it will cast aside the mediator position on behalf of an internal leadership that assures that entrepreneurial guidance is in place for the alliance. Nevertheless, the activities carried out in this stage – in which the facilitator assumes the position of advisor – are:

• to hand over the coordination of the alliance to an internal leadership;
• to externally support the alliance by continuously looking for opportunities and watching over relationships.

The chief role of the network facilitator appears to be that fostering trust within the strategic alliance to the extent that he is able to consider the rational approach of the members and to leverage it: when calculativeness leads the interest, it offers a cohesive factor that makes it attractive for them
to cooperate in order to receive an economic benefit from the collaboration. Instead, when the cohesive factor ceases to be exclusively an economic opportunity, as the members begin to be more willing to cooperate (as result of trust), the facilitator has to begin to move away from the alliance while guaranteeing support when needed.

Again, the cultural context in which the alliance arises seems to influence the role of the network facilitator: in a context such as the one described in the I-Style Partners case study, its role has been highly significant especially in making members take the first step toward such a well-formed alliance. It is expected that - within a more feminine and collectivist culture, the need for a facilitator is reduced or, at least, it attends to other needs by developing common expectations or leveraging a critical mass of influence, as suggested by McEvily and Zaheer (2004).

**Conclusion**

Based on a longitudinal case study, an exploratory model of an alliance building process among SMEs has been developed. The I-Style Partnership is a successful experience of how a strategic alliance among local businesses – competing within the same industry in international markets – can be supported in the creation and early development stage.

In particular it has been found that the alliance building process has to be built on some cohesive factors responding to rationality criteria leading to the entrepreneurs’ choices. Within a highly masculine and individualistic environment, a need to conceive the opportunity for alliance under a calculative perspective, especially in the early stage, has been observed. Subsequently, when collaboration creeps in, a new criterion that is based on relational trust drives the alliance toward a long-term perspective in which a common strategy is shared.

In such a dynamic, a fundamental role is played by the network facilitator, an institution that acts as the playmaker of the alliance, especially by leveraging the interests of the entrepreneurs according to the different stages.

This work, because of its inductive approach, contributes to the literature in terms of theory generation. Further research is needed to empirically test our findings through quantitative surveys or
more extensive case studies. Several conditions have to be considered here in order to gauge these findings: the I-Style Partners’ alliance involves eight firms belonging to the same industrial district and sharing the same culture, even while being naturally adverse to such cooperation. Further research, studying the alliance building dynamics among firms with different cultural backgrounds could contribute significantly to the growth of the field. Other rare insights would be likely to come from further research focusing on the effect that joint performances have on the development of trust, something that was beyond the scope of this work due the present stage of the alliance. While the overall literature showed a positive relation between trust and performance (Zaheer, McEvily, and Perrone 1998; Sako 1998; Dyer, and Chou 2003; Hagen, and Simons 2003; Jap, and Anderson 2003), almost none of it focused on the inverse relation, leaving a gap that yet remains in this field.

Major limitations affecting the research are related to the presence of variables that are difficult to manage, such as those coming from the psychological arena. Whereas there are several models for the above considered economic and sociological behaviour, it is much more difficult to find uniformity regarding the psychological factors that support the model. Indeed, as stated above, the validity of the model proposed has to be tested further through both multiple case studies and statistical inference.

Several managerial implications stand out as a result of this study, especially with regard to the great potential of network facilitators – such as multi-firm associations and service centres acting within a local area – to foster alliance creation among SMEs. In particular, great importance has been given to the history of the interaction built through the years between the facilitator and the alliance members. This seems to be a basic feature that the network facilitator is required to have in order to be a credible warrantor of other members’ behaviour as acting as a safeguard from opportunism.
References


### Table 1: Chronology of the interviews and profiles of interviewees

<table>
<thead>
<tr>
<th>Job Title of interviewed managers</th>
<th>Firm</th>
<th>Number of interviews</th>
<th>Chronology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Executive Officer</td>
<td>Concept</td>
<td>2</td>
<td>2005, 2008</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>Feg - Salvareni</td>
<td>2</td>
<td>2005, 2008</td>
</tr>
<tr>
<td>Managing Director</td>
<td>Giellesse</td>
<td>2</td>
<td>2005, 2007</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>Misuraemme</td>
<td>2</td>
<td>2005, 2007</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>Mobileffe</td>
<td>2</td>
<td>2005, 2007</td>
</tr>
<tr>
<td>General Manager</td>
<td>Mobileffe</td>
<td>2</td>
<td>2005, 2007</td>
</tr>
<tr>
<td>General Manager</td>
<td>Turri</td>
<td>2</td>
<td>2005, 2007</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>Zanaboni</td>
<td>2</td>
<td>2005, 2008</td>
</tr>
<tr>
<td>Chief Executive Officer</td>
<td>Coro</td>
<td>2</td>
<td>2005, 2008</td>
</tr>
<tr>
<td>Director</td>
<td>Compagnia delle Opere (CdO)</td>
<td>3</td>
<td>2005, 2008, 2009</td>
</tr>
<tr>
<td>Int.I Manager</td>
<td>Compagnia delle Opere (CdO)</td>
<td>2</td>
<td>2005, 2008</td>
</tr>
</tbody>
</table>

### Table 2. Profiles of I-style Partners’s member firms

<table>
<thead>
<tr>
<th>Zanaboni</th>
<th>Turri</th>
<th>Misuraemme Group</th>
<th>Mobileffe</th>
<th>Concept International Office</th>
<th>Giellesse</th>
<th>Feg – Salvareni Group</th>
<th>Coro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>25</td>
<td>80</td>
<td>220</td>
<td>25</td>
<td>37</td>
<td>42</td>
<td>200</td>
</tr>
<tr>
<td>Annual revenues 2007 (in ,000 €)</td>
<td>7,000</td>
<td>15,000</td>
<td>30,000</td>
<td>10,000</td>
<td>12,000</td>
<td>6,700</td>
<td>40,000</td>
</tr>
<tr>
<td>Export on revenues (share)</td>
<td>90 %</td>
<td>95 %</td>
<td>35 %</td>
<td>50 %</td>
<td>70 %</td>
<td>40 %</td>
<td>15 %</td>
</tr>
<tr>
<td>Contract share</td>
<td>10%</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
<td>15%</td>
<td>10-15%</td>
<td>10-15%</td>
</tr>
<tr>
<td>Core Business/ products</td>
<td>Classical living/bed rooms</td>
<td>Classical</td>
<td>Modern</td>
<td>Modern day &amp; night</td>
<td>Office</td>
<td>Modern day &amp; night</td>
<td>Modern living/bed rooms and kitchens</td>
</tr>
<tr>
<td>International markets</td>
<td>Russia, Middle and Far East</td>
<td>Russia, East Europe, Saudi Arabia</td>
<td>Italy, Continental Europe</td>
<td>Italy, Russia, UK, Spain</td>
<td>UK, USA</td>
<td>Italy, Spain, UK, USA</td>
<td>Italy, Europe, South Korea, America</td>
</tr>
</tbody>
</table>
Figure 1. Evolution of the alliance: a three-stage model.

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time perspective</td>
<td>Short term perspective</td>
<td>Short term perspective</td>
<td>Long term perspective</td>
</tr>
<tr>
<td>Cohesive factor</td>
<td>Calculativeness (no trust)</td>
<td>Mediated trust</td>
<td>Relational trust</td>
</tr>
<tr>
<td></td>
<td>• First contact among entrepreneurs</td>
<td>• Time for bridging relationships</td>
<td>• Identify with members and territory</td>
</tr>
<tr>
<td></td>
<td>• Identification of a business opportunity</td>
<td>• Emerging of social capital</td>
<td>• Emerging of an alliance identity</td>
</tr>
<tr>
<td>Business objective</td>
<td>Share a business opportunity</td>
<td>Build trust and share knowledge</td>
<td>Share a market strategy</td>
</tr>
<tr>
<td>Network facilitator</td>
<td>• Rationalization of the business opportunity</td>
<td>• Fostering communication and knowledge transfer among entrepreneurs</td>
<td>• Handing over the control of the alliance to an internal leader</td>
</tr>
<tr>
<td></td>
<td>• Pivot of the alliance (dyadic relationships with each member)</td>
<td>• Alliance warrantor</td>
<td>• External source of support</td>
</tr>
</tbody>
</table>

CALCULATIVENESS | CALCULATIVENESS + TRUST
Figure 2. The different roles played by the network facilitator.

Stage 1 – Network facilitator as *Pivot* of the alliance

Stage 2 – Network facilitator as *Mediator* of the alliance

Stage 3 – Network facilitator as *Advisor* of the alliance
Passion as a Predictor of Entrepreneurial Goal Achievement:
An Opportunity Costs and Commitment Approach

Joseph Roberts and Harold Welsch

Abstract
Passion is an important concept in understanding how the entrepreneurship process works. It is often defined as the “fire in the belly” or entrepreneurial commitment which is necessary to overcome the long, twisted and difficult journey of starting and establishing a business. Roberts and Welsch (2008) found that the intensity of entrepreneurial commitment was significantly related to opportunity costs and strength of their motivations. This study extends this research by testing whether these measures of passion are related to entrepreneurial goals. The study captures passion in two dimensions and extends the research across six industries. A proposed model is tested and the results and implications to entrepreneurs are explained.

Key Words: Passion, Entrepreneurial Commitment, Entrepreneurial Goals, Opportunity Costs

Introduction
Passion leads to compelling action. Passion has been identified as an important conceptual variable in the entrepreneurship process. “Passion inspires us to work harder and with greater effect” (Chang, 2001). Academics and practitioners argue that entrepreneurs who exhibit passion are more successful than those who are not (Moses, 2001, Chang, 2001 Baum & Locke, 2004). Passion- word often reserved for romance and artistic work is more prevalent in the business world (Chen, Yao & Kotha, 2009). It is often described as the “fire in the belly” or entrepreneurial commitment, which is necessary to overcome the arduous, twisted and complicated journey of starting and growing a business venture. It is also seen as willingness to incur substantial opportunity costs and make considerable sacrifices in relation to motivations held by entrepreneurs. Some argue that passion is the grease that keeps the wheels of entrepreneurship turning (Roberts, 2009).
Roberts and Welsch (2008) found that the intensity of entrepreneurial commitment was significantly related to opportunity costs and strength of their motivations. The current study explores and extends this research by testing whether these measures of passion are related to achievement of entrepreneurial goals. It is also expected that the presence of passion makes entrepreneurs achieve higher level of success. It is recognized that not all entrepreneurs are the same (Welsch, 2010).

The general hypothesis states that passion (measured by opportunity costs incurred and entrepreneurial commitment) is positively related to goal attainment. It is possible that entrepreneurs think alike and thus miss personal life style opportunities or make sacrifices in order to achieve success as an entrepreneur. Various measures of entrepreneurial passion has been suggested (Getley, 1979; Filion, 1991; Shane, et al., 2003; Cardon, et al., 2009) but criticized as being of limited relevance when a generalized scale is applied to entrepreneurs and minimizes the importance of entrepreneurial activity by failing to capture key aspects of passion. The measures of opportunity costs and entrepreneurial commitment meet the criticisms head on. The highly committed passionate entrepreneur is characterized by single minded focus to start a business and work toward its survival and growth, often at the expense and high costs of other worthy and important goals. The scales were developed and tested in the United States and Central Europe and Mexico where individuals are hard workers, exhibiting sacrifice, work ethic, determination and diligence with a focused commitment to entrepreneurship (Liao and Welsch, 2004). The scales have been successfully validated across 10 different countries in numerous studies.

Perhaps Cardon, et al(2009) said it the best:” … researchers and practitioners alike have invoked passion to explain entrepreneurial behaviors that defy reason-based explanations, such
as unconventional risk taking, uncommon intensity of focus, and unavering belief in dream” (p. 511). The proposed study captures this passion in two dimensions and extends the research across six industries to test the model in different contexts.

**Entrepreneurship Passion**

Given the complexities of entrepreneurship involving uncertainties, risks, innovations, untried processes, new markets, ambiguity and unstable, unpredictable futures, it is vital that the entrepreneur possess a laser-focus and total dedication on the origin, growth and survival of his or her firm. Several authors have suggested that entrepreneurship passion, commitment and intensity are absolutely necessary to be successful. Baron (1998) stated “… their commitment to their ideas, businesses and products is frequently intense” (p. 281). Chen, et al. (2009) define entrepreneurial passion as “an intense affective state accompanied by cognitive and behavioral manifestations of high personal value” (p. 199), whereas Cardon, et al (2005) argue that the notion of “entrepreneurial passion is grounded in affective states recognized as emotional meta experiences associated with high intensity, and developed primarily through enduring bonds of identification and attachment between entrepreneurs and their ventures.” (p. G1)

In a later version of Cardon’s paper (2009) it is stated “when entrepreneurs are aroused by their passion for activities associated with a meaningful identity, they experience intense excitement that comes from pursuit of deeply internalized goals, such that they often ignore activities or people that may detract from it.” (p. 521) it suggests that entrepreneurs are willing to give up things in their passionate pursuit of entrepreneurial goals. Thus we operationalized the concept of “entrepreneurial sacrifice” or “entrepreneurial opportunity costs” that entrepreneurs are willing to pay to pursue their entrepreneurial endeavors. These 18 specific behavioral
measures are listed below. They represent a wide range of diverse engagements across which entrepreneurs participate and serve as a measure of passion.

*Entrepreneurship Opportunity Costs*

In the literature the focus of opportunity costs is usually financial. This paper presents the non-financial costs that entrepreneurs seem to care more than the financial costs. The following items were tested and a variable called opportunity cost was developed. A value of .75 for Cronbach alpha confirmed that the reliability for this variable is high. The following items make up this variable.

- Peaceful life
- Regular hours
- Sleep
- Health
- Leisure
- Hobbies
- Luxury
- Marital harmony
- My children’s education
- Time with my family
- Friends
- Social status
- Religious worship
- Ethical standards
- Financial opportunities
- Savings
- Retirement planning
- Other careers

The opportunity cost perspective emanates from Edwards and Rothard (2000) who suggests that work-family conflict arise because pressures arising from one role are incompatible with those from another role. As a result, obtaining rewards in one domain requires foregoing rewards in another. In fact, Gasser (2006) defines opportunity costs as “the foregone benefit of next available alternative as a consequence of making a choice”. His findings suggest that
opportunity costs are an important determinant of the scale of intended venturing activity. Shaw in his 1992 paper titled “Searching for the opportunity cost of an individuals’ time,” states that the cost of time, not the “value” which is often more important in the determination of surplus measures. The same argument can be made in the case of the entrepreneur who consciously incurs of not only time and money but also leisure and regular hours (such as in the case of an employee) time with family and so on. The opportunity costs have several dimensions to them. There are family costs, financial costs, educational costs, career costs, health costs, quality of life costs and ethical costs. This study examines how these costs influence the entrepreneurial process. Furthermore, the impact of these costs are measured by studying the family and business goals. Do these costs influence entrepreneurs to make permanent sacrifices such as children, education, and family, or temporary sacrifices, such as luxury items, vacation trips, and time off from work, and religious worship, or both?

A thorough review of the entrepreneurship and related economic literature search provides the following findings. There are numerous articles addressing the opportunity costs of being an entrepreneur. This is calculated primarily in terms of financial costs, particularly in dollars and cents. As an example, an entrepreneur investing $100,000 in a small business start-up and fails in a two-year period has lost not only the $100,000 but also the job earnings he could have earned working for someone else. Usually they also incur debt in addition to these above numbers.

One segment of economic literature looks at this type of entrepreneurial activity where entrepreneurs incur heavy losses and condemns it as inefficient use of capital and resources. (Jennings, 1980) However, there is no attention paid to the non-financial aspects of this process of losing start-up capital and other resources. One can argue that this is because it is not worth
exploring and studying. Nevertheless, common sense tells us that any study that looks at one aspect of a phenomenon and not the associated aspects can provide skewed results. When an entrepreneur incurs losses, he or she is put in a situation that can best be described as difficult.

Those that can overcome such difficulties and plough through to the next step are the ones that become successful. Even history teaches us that we have to learn how we as humans can look at our mistakes and overcome them. Thus, the human side of things deserves a closer look. The word cost can be substituted with price or fee. Some related terms are sacrifice, forfeiture, forego, waive, abandon, acquit, endure forsake, and sufferance. Thorough search of the literature, using these terms produced negligible results. The psych literature explains these terms from the psychological perspective in clinical terms. Sociology explains these terms from a relational perspective. In essence, the non-financial costs entrepreneurs have to incur have not been explained clearly in existing entrepreneurship and related sociology, psychology or economics literature.

When an individual is faced with an obstacle, he or she usually attempts to overcome it. Entrepreneurs behave similarly. In the process of overcoming obstacles, entrepreneurs incur costs unlike other individuals because the cost of not overcoming such obstacles can be catastrophic. The following segment explains the theoretical footing of the model. The significant amount of research conducted in the field of entrepreneurship allows a preliminary passion model using costs to be suggested. (Roberts, 1997)

**Entrepreneurial Commitment**

In a study involving members of the National Federation of Independent Business (NFIB), Cooper and Dunkelberg (1986) observed that there are several paths by which one might
become a small business owner, including founding the business, purchasing the business, inheriting the business, and being promoted or brought in by the other owners. They hypothesized that significant difference in the “degree of entrepreneurship” or “entrepreneurship intensity” could be expected. However, they never developed an empirical/operational measure of entrepreneurial intensity or commitment. They suggested that it may not be directly measureable or observable but may be inferred through its reflection in a set of characteristics that they indentified from the previous research (Keats & Bracker, 1988). These included background, attitudes, and “a complex set of factors associated with previous career, incubator organizations and process of starting”. According to Cooper and Dunkelberg, these characteristics collectively reflected the conceptual variable “degree of entrepreneurship”. Until now, no actual measures of have been developed. This conception of entrepreneurial intensity/commitment perhaps will alleviate this need. The concept is not focused on the paths of origins of entrepreneurial endeavors but the behaviors they engage in establishing and growing their businesses.

Entrepreneurial intensity and commitment has its foundation in the Protestant Work Ethic (Weber, 1905) and the achievement motive (McClelland, 1961). It has a secondary base in commitment, internal locus of control, diligence and determination. Despite religious pluralism in U.S. society, the strains of Protestantism have exerted a powerful influence on people’s thoughts and actions since the early history of the country. The main core of these beliefs asserts that spiritual salvation was to be attained through striving and making a commitment to achieve success. More recently this work ethic idea has evolved outside of its religious context to a point where spiritual values are set aside. In this context the focus on religion is replaced by hard work and individuals working for material benefits and personal recognition it affords. It has evolved
into a form of a Type A behavior in motivation theory that leads to understanding of this variable in this study. This behavior in its early characterization was identified by excessive and competitive drive and enhanced set of time and urgency. Later, additional components were identified, such as intense sustained drive to achieve, an eagerness to compete, persistent drive for recognition, a continuous involvement in deadline activities, a habitual propensity to accelerate mental and physical functions, and consistent alertness. Price (1982) had suggested that this behavior pattern is learned in open, competitive economies where upward mobility is possible. Success was thought to be a function of individual effort and that progress is best defined in terms of material or tangible achievements. (e.g., Liao and Welsch 2004).

The visualization of a successful enterprise combined with parental and spousal support, in addition to the right circumstances, such as life stage, education and a nutrient-rich environment can cause an individual to generate a great “fire in the belly”, termed “high entrepreneurial intensity”. This level of commitment to the entrepreneurial endeavor can be characterized as passion. Passion is required for entrepreneurial success (Selz, 1992). It is further characterized by a single-minded focus to start and grow a business. The intensity/commitment variable is operationalized by the following items:

My business is the most important activity in my life.
I’ll do whatever it takes to succeed.
There’s no limit to how long I’ll give everything to my business.
I am willing to make great sacrifices to stay in business.
I would even work elsewhere to restart my business.
My philosophy is to do “whatever it takes” to succeed.
I want my business to make a positive impact on my community.
I would rather own my own business than earn more elsewhere.
Eventually I may sell my business but, if I do, I’ll start again.
**Goal Conflict**

Entrepreneurs must often cope with competing and conflicting goals. Some goal conflicts clearly pose direct challenges for entrepreneurs in that achieving one or more of one’s objective inevitably involves some version of a trade-off or sacrifice – that seeking more of one output inevitably comes at a cost to the others. Conflict is manifested by the simultaneous occurrence of competing pressures from an entrepreneur’s multiple roles that make enacting those roles somehow more difficult. Dierdorf and Ellington (2008) suggest that roles are enacted in separate environments entailing distinct norms and requirements. These disparities often necessitate the sacrifice of meeting expectations for one role to enact the other role. Role conflict occurs when expected behaviors or tasks are at odds with each other. Since the entrepreneur is expected to wear many hats, it is easy to see how they may interfere with each other. Adding to the potential strain of balancing multiple roles is the fact that entrepreneurs have finite resources to transfer from one role to another. Thus, enacting multiple roles can drain these resources, negatively impacting performance and creating stress. To reduce this stress, entrepreneurs are often forced to make concessions in performing one role over another. These concessions are viewed as opportunity costs, or price that must be paid in order to perform one of the conflicting roles. Viewed another way, these are factors (sacrifices) the entrepreneur is willing to give up in order to pursue his or hers entrepreneurial role.

**Work-Family Conflict and Entrepreneurial Goals**

Work-family conflict is a form of inter-role conflict in which the demands of functioning in two domains of work and family are incompatible in some respect. Work-family conflict is within a person across domains transmission of demands from one area of activity to another.
Research has focused how reactions experienced in the work domain are transferred to and interferes with the non-work domain for the same individual. Work-family conflict has led to a variety of outcomes including health issues, including depression and somatic complaints, absenteeism, turnover intentions, job dissatisfaction and job burnout. The concept has been grouped theoretically into three broad categories including time-based, strain-based and behavior-based sources. Given the complex and immediate demands placed upon entrepreneurial behavior, it is highly likely that he or she is subject to these conditions. Furthermore, it is proposed that these conditions interfere with other goals which the entrepreneur has, including:

- To enjoy life
- To be free
- To fulfill my goals
- To express myself
- To reduce stress
- To improve my standard of living
- To promote security for my family
- To give my family work

**Research Model**

Given the intense passions that are required for entrepreneurs to succeed, it is proposed that we discover a best fit model. When the variable – selection procedures are aimed at selecting a model of independent variables these variables should yield the best fit to the model. The criterion for selection is usually the F-statistic:
\[
F(x_1,\ldots,x_p; x_{p+1}) = \frac{\text{SSE}(x_1,\ldots,x_p) - \text{SSE}(x_1,\ldots,x_p, x_{p+1})}{\text{SSE}(x_1,\ldots,x_p)}(n-p-1),
\]

Where \( n \) is the total number of data points, \( \text{SSE} \) is the sum squares due to error - that is, the sum of squares minimized by the least squares method. If adding the variable \( x_{p+1} \) to variables \( x_1,\ldots,x_p \) does not improve (or deletion of the variable \( x_{p+1} \) does not worsen) the fit significantly, this statistic follows an F- distribution; otherwise, the statistic tends to take on larger values. Statistics.com

The above model is tested using the stepwise regression method which at each step determines whether any of the variables can be removed. If none of the variables can be removed, we determine whether another variable can be added. A variable can be added to the model at a step and removed at the following steps and so on, thus the name the stepwise method. The end goal is to determine the best model with the least noise possible.

If the significance value of the F statistic is less than 0.05, which means that the variation explained by the model is not due to chance. The ANOVA table reports a significant F statistic, indicating that using the model is better than guessing the mean.

Based on the above the following is tested:
Entrepreneurial passion as expressed by the composite variables commitment and opportunity costs can predict goal achievement.

**Hypotheses**

It is expected that entrepreneurs will exhibit behavior that compels them to act on their business ideas. The following examine the behaviors of entrepreneurs across six different industries.

**Hypothesis #1**

It is expected that the best fit model with “enjoy life” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #2**

It is expected that the best fit model with “to be free” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #3**

It is expected that the best fit model with “to fulfill my goals” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #4**

It is expected that the best fit model with “to express myself” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #5**

It is expected that the best fit model with “to reduce stress” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #6**
It is expected that the best fit model with “to improve my standard of living” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #7**

It is expected that the best fit model with “to promote security for my family” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Hypothesis #8**

It is expected that the best fit model with “to give my family work” and the predictor variables commitment and opportunity costs will be positively related and yield significant R and F values.

**Results**

**Table 1**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Predictors</th>
<th>R- Value</th>
<th>F- Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy life</td>
<td>whatever it takes</td>
<td>.201**</td>
<td>41.83</td>
</tr>
<tr>
<td></td>
<td>own business than earn more elsewhere</td>
<td>.214**</td>
<td>23.92</td>
</tr>
<tr>
<td>To be free</td>
<td>Business most important in life</td>
<td>.229**</td>
<td>35.02</td>
</tr>
<tr>
<td></td>
<td>Philosophy is to do whatever it takes</td>
<td>.230**</td>
<td>30.02</td>
</tr>
<tr>
<td>Express myself</td>
<td>Business is most activity in life</td>
<td>.127**</td>
<td>16.3</td>
</tr>
<tr>
<td>To reduce Stress</td>
<td>Business most important in life</td>
<td>.234**</td>
<td>57.63</td>
</tr>
<tr>
<td></td>
<td>Philosophy is to do whatever it takes</td>
<td>.242**</td>
<td>31.08</td>
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<tr>
<td>To improve Standard of living</td>
<td>My Philosophy is to do whatever it takes</td>
<td>.113**</td>
<td>12.78</td>
</tr>
<tr>
<td></td>
<td>Own business than earn more elsewhere</td>
<td>.159**</td>
<td>12.92</td>
</tr>
<tr>
<td>To provide security for family</td>
<td>Business is most important in life</td>
<td>.102**</td>
<td>10.36</td>
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</table>
To give family work & Business most important in life & .161** & 26.37

F-Statistic significance .000

<table>
<thead>
<tr>
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<table>
<thead>
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<th>F Value</th>
<th>Significance</th>
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</thead>
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<tr>
<td>Financial Opportunities</td>
<td>.148</td>
<td>22.19</td>
<td>.000</td>
</tr>
<tr>
<td>Luxury</td>
<td>.223</td>
<td>25.15</td>
<td>.000</td>
</tr>
<tr>
<td>Retirement Planning</td>
<td>.267</td>
<td>25.45</td>
<td>.000</td>
</tr>
<tr>
<td>Time with Family</td>
<td>.278</td>
<td>20.79</td>
<td>.000</td>
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</table>

<table>
<thead>
<tr>
<th>Table 3</th>
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</thead>
<tbody>
<tr>
<td><strong>Dependent Variable: To enjoy life</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Predictor Labels</th>
<th>R Value</th>
<th>F Value</th>
<th>Significance</th>
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</thead>
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<tr>
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<td>Regular Hours</td>
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<td>Leisure</td>
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<td>Marital Harmony</td>
<td>.373</td>
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<td>Ethical Standards</td>
<td>.389</td>
<td>33.95</td>
<td>.000</td>
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<td>Other Careers</td>
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<td>.000</td>
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<td>Friends</td>
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### Table 3

**Dependent Variable: To be Free**

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<th>F Value</th>
<th>Significance</th>
</tr>
</thead>
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<tr>
<td>Financial Opportunities</td>
<td>.148</td>
<td>22.19</td>
<td>.000</td>
</tr>
<tr>
<td>Luxury</td>
<td>.223</td>
<td>25.16</td>
<td>.000</td>
</tr>
<tr>
<td>Retirement Planning</td>
<td>.267</td>
<td>25.46</td>
<td>.000</td>
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<tr>
<td>Time with family</td>
<td>.278</td>
<td>20.79</td>
<td>.000</td>
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### Table 4

**Dependent Variable: To Express Myself**

<table>
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<th>Significance</th>
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<tr>
<td>Financial Opportunities</td>
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<tr>
<td>Regular Hours</td>
<td>.206</td>
<td>22.15</td>
<td>.000</td>
</tr>
<tr>
<td>Religious Worship</td>
<td>.224</td>
<td>17.51</td>
<td>.000</td>
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</table>

### Table 5

**Dependent Variable: To improve my standard of living**

<table>
<thead>
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<th>R Value</th>
<th>F Value</th>
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<tr>
<td>Other Careers</td>
<td>.124</td>
<td>15.45</td>
<td>.000</td>
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<td>Children’s Education</td>
<td>.232</td>
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<td>Predictor Labels</td>
<td>R Value</td>
<td>F Value</td>
<td>Significance</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>Savings</td>
<td>.268</td>
<td>25.70</td>
<td>.000</td>
</tr>
<tr>
<td>Peaceful Life</td>
<td>.301</td>
<td>24.54</td>
<td>.000</td>
</tr>
<tr>
<td>Sleep</td>
<td>.316</td>
<td>21.94</td>
<td>.000</td>
</tr>
<tr>
<td>Marital Harmony</td>
<td>.326</td>
<td>19.62</td>
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<td>.340</td>
<td>18.50</td>
<td>.000</td>
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<tr>
<td>Ethical Standards</td>
<td>.361</td>
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<tr>
<td>Religious Worship</td>
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<td>18.13</td>
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</tr>
<tr>
<td>Social Status</td>
<td>.388</td>
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Table 6

Dependent Variable: To Reduce Stress

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<th>F Value</th>
<th>Significance</th>
</tr>
</thead>
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<tr>
<td>Other Careers</td>
<td>.343</td>
<td>.133.91</td>
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<tr>
<td>Financial Opportunities</td>
<td>.619</td>
<td>308.87</td>
<td>.000</td>
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<tr>
<td>Regular Hours</td>
<td>.656</td>
<td>250.34</td>
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</tr>
<tr>
<td>Peaceful Life</td>
<td>.664</td>
<td>195.89</td>
<td>.000</td>
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<tr>
<td>Leisure</td>
<td>.667</td>
<td>159.35</td>
<td>.000</td>
</tr>
<tr>
<td>Time with Family</td>
<td>.669</td>
<td>133.91</td>
<td>.000</td>
</tr>
<tr>
<td>Children’s Education</td>
<td>.671</td>
<td>115.70</td>
<td>.000</td>
</tr>
<tr>
<td>Ethical Standards</td>
<td>.672</td>
<td>102.05</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 7

Dependent Variable: To provide security for my family

<table>
<thead>
<tr>
<th>Predictor Labels</th>
<th>R Value</th>
<th>F Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends</td>
<td>.112</td>
<td>12.75</td>
<td>.000</td>
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<tr>
<td>Peaceful Life</td>
<td>.232</td>
<td>28.27</td>
<td>.000</td>
</tr>
<tr>
<td>Time with family</td>
<td>.249</td>
<td>21.92</td>
<td>.000</td>
</tr>
<tr>
<td>Savings</td>
<td>.259</td>
<td>17.80</td>
<td>.000</td>
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</table>
Discussion

The empirical results demonstrate that each of our hypotheses was proven. The items in the composite variables commitment and opportunity costs are positively related to the dependent variables. The impact of predictor variables on the dependent variable are explained in each of the categories. Whatever it takes behavior to make the business a success along with the commitment to own business even if it means giving up higher earnings elsewhere at another job point to an entrepreneur who thinks of the working in the business as a higher calling or more than just a job. It is this attitude that can create a state of mind that can lead to enjoying life as a business owner. In the same way; the not giving up mindset and philosophy adds to the level of importance that the business enterprise is the most important thing in the life of an entrepreneur. This leads to the freedom one can enjoy as an entrepreneur. This theme seems to be the common thread that explains achievement of the entrepreneurial goals for entrepreneurs. Entrepreneurs seem to approach these goals as expectations that can be achieved over time. The idea that entrepreneurs have to give up something to achieve success is similar to anyone who is seeking to establish a career; however the major difference is that some of the costs that entrepreneurs have to sacrifice are not common in the general populations. Costs such as peaceful life, to be free and enjoy life are such costs. Entrepreneurs are risking marital harmony, leisure and even ethical standards to achieve a level of enjoyment. This sample includes restaurant owners, financial service providers and usually these businesses demand constant attention to customers and logistics. This is perhaps why these predictors are behaving in the manner explained by empirical analysis.
Peaceful life, Friends, Time with family and Leisure are related to quality of life of an entrepreneur. The results suggest that entrepreneurs are willing to incur these costs and willing to sacrifice quality of life in order to achieve their goals. It is not unusual to make sacrifices in order to achieve success but entrepreneurs seem to behave differently than the general population when it comes to the level of sacrifice they are willing to make. The very quality of life that they seek has to be sacrificed in order to achieve it. From psychometric analysis this behavior is captured by the independent variables and their predictors. The predictors of passion are significant at p<.05 and further more the F statistic is significant at .000.

As entrepreneurs prepare to start a business or expand their operations they should be willing to give up religious worship, compromise their children’s education, Leisure, Luxury, Other Careers and even Marital Harmony. The general idea perhaps is to incur these costs for a period of time and catch up as the businesses become more successful. The reality however is somewhat different, once incurred these costs are usually permanent. This should give pause to entrepreneurs and entrepreneur educators. The opportunity for capturing these costs once incurred is forever gone.

**Conclusion**

This study demonstrates how entrepreneurial passion can be measured empirically and successfully predicted by utilizing the opportunity costs incurred by entrepreneurs and the high level of commitment they display to starting and establishing their businesses. However passion sometimes is negatively interpreted and conjures up images of emotional and perhaps even unprofessional behavior. This paper suggests that passion is a skill that entrepreneurs have to master much like any other competency or skill necessary to succeed in the ever changing
landscape of entrepreneurship. However, a comprehensive study of this proposition needs to be conducted that goes beyond the opportunity costs and commitment concepts.

Empirically we should define passion in terms of several additional predictors and weight some of these variables. Based on the weighting of each of these variables we can increase or decrease the influence of predictors resulting in more precise regression estimates. The search for more reliable predictors must continue to determine how passion works as the ingredient that keeps all the wheels of entrepreneurship turning.

Joseph S. Roberts, Ph.D. is the Coleman Foundation Professor at Columbia College Chicago. His research interest includes creating theory that can explain why entrepreneurs exhibit behaviors that are not found in the general population.

Harold P. Welsch, Ph.D. is the director of the entrepreneurship program at DePaul University in Chicago and holds the Coleman Foundation Chair in Entrepreneurship. His research interest includes angel investors, technology communication, motivations of entrepreneurs, privatizing economies and economic development.

Bibliography


Critical factors for SMEs from emerging economies competing in developed markets

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Internationalization is more and more a key issue in the increasingly global economy. This workshop introduces participants to key issues in the process of internationalization of SMEs from emerging economies competing in developed markets. The new institutional economics (NIE) and the resource based view (RBV) theories complement each other and offer a suitable framework to explore the critical factors in that process. From the NIE theory, firms structure themselves in response to institutional changes. Globalization makes boundaries less restrictive and facilitates a global competition, giving a boost to processes of internationalization. From the RBV theory, firms must develop competitive advantages in the international arena that allow them not only going abroad successfully, but also being capable of defending their positions in their domestic markets.

Keywords: Internationalization, SMEs, emerging economies.
abstract

The focus of this workshop is the real meaning of the terms interdisciplinary and cross-campus in the context of collegiate entrepreneurship programs. Traditionally these programs are designed and taught by the school of business for non business students. This workshop presents another model directly involving faculty from another school (college of arts and sciences) and school of business in designing, implementing, teaching, and administrating an interdisciplinary entrepreneurship minor. Each speaker will present an aspect of the program and discuss implications and lessons learned.. Participants will receive handouts with our view of best practice in constructing such cross-campus, interdisciplinary programs.
Abstract

For over three decades, the Iraqi economy has been adversely impacted by war, costly militarization, and international sanctions. In these turbulent times, Iraqi entrepreneurs face numerous challenges, including an ineffective legal environment, no access to certain markets or finance, the inability to acquire new skills, and the general lack of government support.

This paper examines efforts by the Iraqi government together with the United States and the international community to create a business climate conducive to establishing an entrepreneurial class. Identifying the practices utilized in addressing these challenges should aid future entrepreneurial development efforts in emerging economies or war-torn areas.

Introduction

For the past three decades, the Iraqi economy has been adversely impacted by three wars, costly militarization, and international sanctions. These events have severely shaken Iraq’s population, damaged its political and economic institutions, and negated many of the previous economic and social gains (Gorrill 2007). In these turbulent times, Iraqi entrepreneurs and small business owners have faced numerous challenges. The inability to acquire new skills and managerial expertise, a lack of access to markets, technologies, and finance, the general absence of government support, and the nonexistence of a legal and regulatory environment conducive to business establishment and growth, have constrained the growth of a sizeable entrepreneurial class (USAID Tijara Program 2009).
Iraqi small business owners and entrepreneurs, not unlike others, suffer from the same constraints, the liabilities of newness and smallness. They often lack the physical capital, financial capital, human capital, social capital, and reputational capital to successfully operate their businesses and new ventures. This paper will examine how the US government, especially through the efforts of the US Agency for International Development (USAID), has partnered with the Iraqi government, non-governmental organizations (NGOs), community-based organizations, and the private sector to create a business climate which reduces the challenges faced by Iraqi entrepreneurs and which is conducive to entrepreneurial development. Information for the paper was garnered from secondary sources, especially the WebPages of the USAID-Tijara project and from first hand observations of one of the authors who worked in Iraq for 17 months as a civilian contractor for one of the many civilian contracting companies operating in Iraq under contracts with the U. S. Department of Defense.

***Liabilities of Newness and Smallness***

Entrepreneurial research has identified two problems that challenge entrepreneurs and small business owners: the liabilities of newness and smallness (Stinchcombe 1965; Singh and Lumsden 1990).

**Liability of Newness**

Liability of newness is the propensity of new organizations to be less successful or be required to expend greater resources. New organizations have to learn new roles and spend significant amounts of time, money, and effort in doing so (Singh and Lumsden 1990). New businesses must establish external legitimacy with customers, locate sources of capital, and create external networks (Singh and Lumsden 1990). Older organizations have a distinct
advantage in having already established relationships with their stakeholders, especially their customers. Newer organizations lack these stable relationships because the trust needed to establish relationships among the parties is not present. Further, lack of stable relationships and the absence of trust affects the ability of new businesses to attract and retain human capital (Swaminathan 1996). The absence of networks with professional advisors, especially accountants, is also often lacking (O’Neill and Duker 1986). The liability of newness argument associates the problems faced by individual organizations, such as lack of social capital and the difficulties of running their businesses, with the increased likelihood of organizational mortality (Bradley and Rubach 1999).

New business owners often lack specific business skills, including general management skills, capabilities in finance, operations, or strategy, and the capacity to plan (Shonesy and Gulbro 1998). New organizations and the individuals who run them often fail because the owners simply lack the knowledge and experience to operate the businesses (Dyke, Fischer, and Reuber 1992). Business experience can take many forms, including previous management experience, industry specific experience, and observational experience gained from observing others, especially family members who have started or managed a company (Dyke, Fischer, and Reuber 1992; Duchesneau and Gartner 1990). Managerial inadequacy, incompetence, inefficiency and inexperience are common themes in explaining small business failures (Haswell and Holmes 1988). Bad management skills include uneven knowledge which exists when the business operators lack experience in one or more functional areas which are critical to the success of the business, especially human resource skills (Castrogiovanni 1996). Especially, a lack of expertise in financial-related matters is often cited as a cause of failure (Peterson, Kozmetsky, and Ridgway 1983).
One way to ameliorate the effects of the liability of newness is to purchase an existing business (Duchesneau and Gartner 1990). A small business owner can buy legitimacy by acquiring an existing business, rather than starting a business from scratch. The networks necessary for success are already established. However, the absence of an entrepreneurial class does not provide the critical mass of businesses needed to take advantage of this alternative strategy.

**Liability of Smallness**

Related to the liability of newness is the liability of smallness, which assumes that organizational size influences organizational success. Firm size has been considered to have an effect on the availability of resources. Lack of resources put small businesses at a distinct disadvantage.

Smaller firms often suffer from inadequate financial resources, relying upon limited sources of capital, including the savings of the owners. Smaller firms are often highly leveraged, carrying a high debt load (O’Neill and Duker 1986). Smaller firms lack the necessary resources, both staff and time, to engage in strategic planning (Robinson and Pearce 1984). Further, compliance with governmental regulation weighs more heavily on smaller organizations (Aldrich and Auster 1986). Smaller businesses also have a more difficult time competing for skilled and knowledgeable personnel. Small firms often do not have an internal labor market upon which to draw. Additionally, coupled with limited financial and staff resources, small firms often cannot afford the expenses of needed reward systems and training and recruitment programs for their workforces. Smallness can also affect the creation of networks with external stakeholders, especially suppliers and customers (Aldrich and Auster 1986).
Challenges in Iraq

While entrepreneurs generally possess the experience and skills gained from a craft or trade, they are often poorly trained in business management and lack formal training or business education. In addition to absence of managerial expertise, entrepreneurs and small business owners located in developing economies or war-torn economies face multiple obstacles, including the absence of an entrepreneurial class. There are usually few institutions that provide education and training opportunities or facilities, and those that do have limited capacities. There are often inadequate seed capital, microfinance, and specialized financial institutions to provide needed capital. Often the governments in such areas are unable to provide support or they create roadblocks to business development through bureaucratic red tape or their acquiescence to corruption. In war-torn areas, infrastructures are often inadequate, especially transportation and logistics networks, which impede importing and exporting. The deterioration of law and order and a weak legal and regulatory system create a business climate that is not conducive to entrepreneurial development (USAID Tijara Program 2009). Iraqi entrepreneurs face each of these challenges. The responses to these challenges by the US government, especially through the efforts of USAID, and its partnerships with the Iraqi government, non-governmental organizations (NGOs), community-based organizations, and the private sector will be examined next.

Responses to the Challenges

Absence of an Entrepreneurial Class.

Max Weber in *The Protestant Ethic and the Spirit of Capitalism* (1958) theorized that the emergence of entrepreneurship in a country may depend upon the emergence of an
entrepreneurial class (Xu 2008). There are some commentators, who when interpreting Weber, have argued that predominantly Muslim societies do not possess "the spirit of capitalism" or work ethic characteristics necessary for the development of an entrepreneurial class. (Benzing, Chu, and Kara 2009; Xu 2008). This is highly disputed and others contend that individual initiative is sufficient for the development of an entrepreneurial class. The presence of organizations to promote and support entrepreneurial development and the creation of family-owned small and medium-scale companies will guarantee the creation of a strong entrepreneurial class. (Benzing, Chu, and Kara 2009).

Supporting organizations are present in contemporary Iraq. At the international level, Iraq is progressing toward World Trade Organization (WTO) membership, having achieved observer status (U.S. Commercial Service 2009). The International Monetary Fund (IMF) has recognized the government of Iraq and granted an assistance package of over $400 million (U.S. Commercial Service 2009). The IMF under its programs of policy advice and financial support has assisted in the successful achievement of macroeconomic stability: improved public financial management, a new currency accepted by the populace, an efficient banking system, and an improved economy (International Monetary Fund 2009; U.S. Commercial Service 2009). Additionally, the World Bank, through the International Finance Corporation, has provided over $170 million to establish the Iraq Small Business Finance Facility to assist Iraqi banks in their efforts to provide loans to small businesses (U.S. Commercial Service 2009).

On a national level, the U.S. government through the USAID has played a significant role in economic development. Initially the USAID’s mission was to restore Iraq’s infrastructure, support healthcare and education, expand economic opportunities, and improve the efficiency of the Iraqi government (U.S. Commercial Service 2009). The USAID Izdihar project, begun in
2005, attempted to create a sustainable microfinance industry, bank lending for small and medium size enterprises, business development services and training, investment promotion, and trade reform (USAID-Tijara 2009). In 2008, the USAID Tijara project became the successor to the Izdihar project. *Tijara* means trade in Arabic. The Tijara project is a three to five year program to promote private enterprise growth and employment in Iraq. The project focuses on Iraqi communities and provides services that will stimulate businesses and provide greater access to loans and financial services (USAID-Tijara 2009). The mission of the Tijara project is:

“to promote economic growth and employment in Iraq by increasing private sector access to finance, in particular for micro, small and medium enterprises. This objective is fulfilled by stimulating microfinance institutions and private banks to increase loan volume and diversify their services and clients; by creating and supporting indigenous providers of business development services; and by working with the Government of Iraq to develop an improved enabling environment for increased trade and investment in the private sector.” (USAID-Tijara 2009).

Other organizations created to support small business development and entrepreneurship include Business Centers in Baghdad, Basra, Kirkuk, and Mosul that provide business services and information (U.S. Commercial Service 2009). Additionally, there are numerous Iraqi business associations created to link businesses: Union of Iraqi Chambers of Commerce, Iraqi Industries Union, Iraqi Businessmen’s Association, and Iraqi Contractor’s Federation (Coalition Provisional Authority n.d.)

At the local level, the creation of Small Business Development Centers has been a critical element in business expansion. The critical services that SBDCs perform will be discussed next.
Educational Opportunities

Providing educational and training opportunities or facilities are critical to ameliorating the liabilities of newness and smallness. The USAID, especially through the Tijara project, and the Iraqi government fully recognize this and created SBDCs to fill these needs. The SBDC services range from offering microloans to develop new businesses to offering basic business training courses to help educate the Iraqi citizenry about how to manage a business (see Figure 1). The SBDCs have created a voucher system to provide individuals with the financial resources to pay for the business education programs. The SBDCs also offer assistance for creating business plans and help entrepreneurs develop businesses from the ground up in areas that vary from taxi drivers to new hospitals. Further, SBDCs sponsor business conferences, host trade fairs, and provide business and consulting services.

A critical service that SBDCs perform is linking aspiring and struggling entrepreneurs with microfinance institutions and banks that have capital to invest in the local business economy. In its attempts to link businesses with financiers, it is interesting to note that in the Frequently Asked Questions section of SBDC’s website, the agency was asked if there was an age limit on receiving assistance from the SBDC. The response was intriguing: “We would expect that a person who wants to create a business or has an idea should be 15 years of age or older.” (Small Business Development Centers in Iraq n.d.).

Inadequate Access to Finances

Iraq’s financial sector is still developing. Iraq’s six state-owned banks make up over 90% of the banking sector of the country. The two largest banks, the Rafidian and Rashid, account for over 85% of the sector’s assets (U.S. Commercial Service 2009). However, Iraq remains seriously “under banked.” (U.S. Department of State, 2008: 3). Most banking
operations concern basic consumer transactions, which has left credit transactions for small businesses and entrepreneurs to private transactions and the microfinance industry (U.S. State Department 2008).

Microfinance and microlending are relatively new to Iraq (USAID-Tijara 2009). Before 2003, there was no microfinance industry in Iraq. While loans were made to state-run enterprises and some small businesses during the Saddam Hussein regime, financial capital was often available only to those loyal to the regime. Entrepreneurs without political connections had no sources of capital except loan sharks (Iraq Microfinance Industry (IMFI) 2010).

Between 2003 and 2006, there were only three Microfinance Institutions (MFIs) in Iraq and those were operated by international NGOs (USAID-Tijara 2009). Currently, there are ten microfinance institutions operating in Iraq’s 18 governorates. Loans to micro and small business enterprises range from $500 to $25,000 in size with an average duration of 12 months. Interest rates vary depending on loan size and the business’s location (Iraq Microfinance Industry (IMFI) 2009).

The USAID began the Izdihar project in 2005 (it was terminated in March 2008). The Izdihar project began the USAID efforts to create a sustainable microfinance industry and provide for bank lending to small and medium sized enterprises. In 2006, the Izdihar project, in conjunction with the US military, created and funded the first indigenous Iraqi MFIs: Al Bashaer in Baghdad and Al Aman in Kirkuk. By the time the Izdihar project was terminated in 2008, six additional MFIs had been established (see Figure 1) (USAID-Tijara 2009).

Since July 2003, when the first MFI working with the USAID began operation, some 200,000 loans worth more than $370.7 million have been made (Iraq Microfinance Industry (IMFI) 2009). Over 75% of the microloans were made to start or improve businesses in
production, services, agribusiness, and trade. The remaining loans were for home improvements which supported home-based and cottage industries. Private residences are often the locales for many neighborhood businesses, such as barbers, cosmetologists and seamstresses (USAID-Tijara 2009).

As of February 2010, there are 58,852 outstanding microfinance loans in Iraq with a total value of $82,855,717 (US) (USAID-Tijara 2009). The primary goal of the Iraqi microfinance industry is to provide quality financial services, mostly through loans, that will stimulate economic growth and create new and higher-paying jobs. The Tijara program assists in these endeavors by providing business development services and creating a sustainable microfinance industry (USAID-Tijara 2009).

Government Support

The Iraqi government has recognized the need to grow a strong private sector. The government understands that a modern free market economy and a favorable legal environment are necessary for Iraq to join the global economy. As discussed herein, there has been substantial progress in the government’s efforts to establish a business climate conducive to economic growth (USAID-Tijara 2009).

Iraq’s currency has been successfully transitioned to the New Iraqi Dinar and a new central bank has been created (U.S. Commercial Service 2009).

While much work remains to be done, Iraq is on the way to establishing an investor-friendly business environment (U.S. Department of State 2008). Although land ownership by foreigners continues to be restricted in most of Iraq, the government is very open to foreign investment. Iraq’s constitution affords protection from expropriation. Arbitration is well developed and supported. Despite problems associated with persistent crime and lawlessness,
the protection of intellectual property rights (IPR) is well recognized; Iraq is a signatory to a number of international IPR treaties (U. S. Department of State 2008).

Under the Hussein regime, commercial laws existed, however, the laws were not up to international standards. Trade was severely restricted and subject to extensive licensing requirements and inspections (U.S. Commercial Services 2009). While there are still areas of the law that are weak (labor, competition, and consumer protection laws) the Iraqi government has moved forward on a number of fronts to enact laws conducive to business development.

Corruption remains a major problem in Iraq. Under the Hussein regime, corruption was a way of life touching all economic transactions (U.S. Department of State 2008). The legacy of the prior regime still affects the business climate, especially government procurement. While the government has created agencies to lead anti-corruption and anti-bribery efforts, their success so far has been somewhat mixed and their operations somewhat ineffective (U.S State Department 2008).

**Adequate Infrastructure**

Iraq’s infrastructure is being restored. The airports in Baghdad, Basra, and Irbil are all now fully functional with civilian flights nearly doubling since Spring, 2004. The ports of Uum Qasr and Khwar Az Zubair are now reopened, allowing for increases in both import and export trade (U.S. Commercial Service 2009). Travel by automobile to and from neighboring countries (Kuwait, Jordan and Turkey) is manageable. There are still major security issues associated with car travel. However, highways are modern with fuel and food available along most major routes. While not without some connection and interruption of service issues, mobile and satellite phone service is available (Coalition Provisional Authority n.d.). In 2003, US Congress appropriated
over $18 billion to fund the Iraqi Project and Contracting office to support the reconstruction of
Iraq’s infrastructure (US Commercial Service 2009).

**Presence of Legal and Regulatory System**

Security continues to be the number one deterrent to business development. Theft and
violent crime persist. Security issues are still a paramount concern for business and the Iraqi
government (U.S. Department of State 2008).

Saddam Hussein came to power in 1979 and was said to rule with a true “iron fist.” He used fear as a regular tactic to keep the Iraqi citizens under his control. Examples of the harsh
tactics used under Saddam Hussein are many. Iraqi citizens were not allowed to assemble legally unless it was to express support for the government. The Iraqi government controlled the establishment of political parties, regulated the parties’ internal affairs and monitored the activities of their members. Police checkpoints on Iraq's roads and highways prevented ordinary citizens from traveling. Travel abroad was nearly impossible; government permission and expensive exit visas were needed. Before traveling abroad, an Iraqi citizen had to post collateral. Iraqi women could not travel outside of the country without the escort of a male relative. The activities of citizens living inside Iraq who received money from relatives abroad were closely monitored.

Even with the liberation of the country, Iraq is not without its problems. The primary religion in Iraq is Muslim. The Iraqis are a deeply religious people and hold to their beliefs throughout their personal and business lives. The Muslim religion generally comprises two conflicting sects, Sunni and Shia. This division has led to sectarian conflicts. While the actual religious differences between the two factions are few (both groups believe in the five fundamental Pillars of Islam and each group recognizes the other group as part of the Muslim
faith), the differences and contentions between the two groups go beyond who is the rightful successor to Muhammad and extend to the political realm where the issue of inclusion in the political process is contested.

The threat of attacks against the citizenry and their facilities remains high (U.S. Commercial Service 2009). The following anecdote is descriptive of the effects of security breakdowns. One of the authors was contracted to the Department of State to oversee operations of the embassy in the southern Iraq town of Basra. During the last 7 months of his deployment, he was a manager of a group of Iraqis. Every morning the group of Iraqi men who were hired to work for the embassy would be picked up at the front gate of the base in a fully armored bus for transportation to U.S.-run facilities. While the State Department took every precautionary step to ensure the safety of embassy workers, much attention was drawn to the Iraqi workers being picked up at the gate in the armored bus. This apparently spread back into the town and insurgents took notice. One day after finishing his day job at the embassy, an Iraqi man went home to find that his son had been kidnapped and was being held for ransom. This incident caused a noticeable change in the demeanor and work behavior of the supervised workers. The workers began to disappear for weeks at a time and when they did show up for work they were very distant and reluctant to help. The workers had equated the author with the State Department, and lost trust in their supervisor because of the kidnapping. The workers became reluctant to do any business with the embassy and only did so out of necessity for money.

**Conclusion**

This paper examined the efforts by the Iraqi government to create a business climate that ameliorates the challenges and obstacles faced by Iraqi entrepreneurs. The Iraqi government
acknowledges that the real engine of sustainable economic growth is in the private sector and understands that institutions must be put in place to support entrepreneurial development and the creation of an entrepreneurial class.

A dynamic private sector is the driving force behind inward investment, technological change, and economic growth. It is a major driver of a strong market economy. Iraq is no exception to this rule. In order to transform itself, Iraq has focused on entrepreneurs and small businesses, with the support of the international community, especially the United States. This study addressed the challenges faced by Iraqi entrepreneurs and small business owners. These challenges are not dissimilar from those faced by entrepreneurs in other war-torn regions, such as the Middle-East, Africa and Sri Lanka. What seems to be different is the presence of significant support programs, especially those funded by the US government to foster entrepreneurial development and to support the entrepreneurial spirit of the Iraqi people.

Despite operating under the challenges of an insecure political environment, including continued sectarian violence, inadequate sources of human capital, and an underdeveloped legal and regulatory schema, the Iraqi entrepreneurial class has displayed significant growth – it is succeeding and winning. The potential for Iraq is described by the Coalition Provisional Authority:

“Iraq is a uniquely attractive place for business in the Middle East. Iraq’s blend of hardworking, resourceful people; rich agricultural potential; abundant natural resources, including oil, phosphate, and sulfur; and a central Middle East location make it ideally suited for investment opportunities. Despite decades of under-investment and an ensuing war for the liberation of its people, Iraq is recovering and on the road to a booming
future. The potential of Iraq and its abundant resources is being unleashed in the country’s new free market economy.

Iraq has close to 25 million people along with a long-suppressed demand for modern goods and services which were denied to them for years. Since the summer of 2003, consumption has increased as a result of an increase in wages and the opening of international trade. A surge in recent foreign-donor investment will result in up to a million new jobs, provide significant economic stimulus, and accelerate consumption. The recent establishment of a new, single currency, a transparent legal environment, and an open business environment will help ensure strong, sustained growth in the years ahead” (Coalition Provisional Authority (CPA) n.d.).

The USAID Tijara Project, together with its predecessor, the Izdihar program, has provided both financial capital and services to nascent Iraqi businesses. The programs have created a successful microfinance industry. More than 132,000 microloans, worth a combined value of $300 million, have already been made to Iraqi businesses (U.S. Federal News Service 2009). Small Business Development Centers (SBDCs) have been created throughout Iraq to provide services and educational opportunities. The USAID also provides support to the Iraqi government in its efforts to overcome its shortcomings concerning security, legal system and international trade.

A better understanding of the challenges faced by new and small businesses should enable policy makers and business advisors to better serve small business owners in Iraq and other areas of the world that are subject to disruptions caused by war, corruption or violence. Identifying the practices utilized in addressing these challenges should aid future entrepreneurial development efforts in emerging economies or war-torn areas.
References


Figure 1 USAID Tijara Project Outreach Activities (USAID-Tijara Project 2009)

- **USAID-Originated Microfinance Institutions**
- **Microfinance Institutions Originated by International NGOs**
- **ICBG Guaranteed Loans to SMEs**
- **Small Business Development Centers in Operation**
- **Small Business Development Centers in Formation**
- **WTO Accession Support**
- **Support for the National Investment Commission**
The Role of Environment in Fostering Conductive Entrepreneurial Learning: Is Entrepreneurship Boot Camp an Effective Tool in Teaching the “Art” Form of Entrepreneurship?

Caleb Kwong
Jay Mitra

Introduction

Gibb’s (2002) notion of conductive entrepreneurial environment points to the importance of providing an all-rounded student entrepreneurship learning experience that meets the rigors of academia, while keeping an experientially-based approach that enhance creativity and innovation (Gibb, 2002; Porter and McKibbin, 1988). Since then many components that may enhance this conductive entrepreneurial environment has been identified, including work experience schemes (Timmon et al., 1987) and campus-based extracurricular activities. This exploratory study examines the value of entrepreneurship summer camp at the end of an academic year aiming to allow students to participate in multidimensional entrepreneurship activities and discussions in a less formal environment. It is expected that an informal environment away from campus would produce added-value to classroom-based entrepreneurship learning, whilst its multidimensional nature would produce different outcomes to those of other experiential-learning approaches, thus providing another piece of jigsaw to the conductive entrepreneurial environment puzzle.

The Role of Environment in the Entrepreneurial Learning Process

Learning models such as Brigg (1989) have long proposed that environment and learning are closely related. It is found that students who are embedded in a learning environment have higher motivation, self-efficacy, inter-personal self-esteem, and are more satisfied with their learning experience (Astin, 1975; 1999). Traditional
content theory that places students in a passive role of information has therefore been widely challenged, particularly in the context of entrepreneurship learning (Gibb, 2002). As entrepreneurship development often follows a chaotic and ill-defined process of trial and error (Boussouara and Deakins, 1998; Soloman, 2007), many have argued that the formalistic and theoretical nature of classroom-based learning neglects the development of judgement, patience, responsibility and other practical skills that are essential in dealing with uncertainties and ambiguities (Boussouara and Deakins, 1998; McCabe, 1998; Soloman, 2007; Hynes, 1996). Classroom-based entrepreneurship learning has also been criticised for its inability to enhance participant’s creativity, innovation, and problem solving skills – skills that are referred to as the “art” form by Jack and Anderson (1998) and Shepard and Douglas (1996). In addition, it has also been criticised that some important traits of entrepreneurs, such as self-confidence, persistence and high energy level cannot wholly be acquired from classroom (Miller, 1987; Ryle, 1963; Garavan and O’Cinneide, 1994). Kantor (1988) study of 400 students in Canada, for example, found that it is easier to teach skills rather than traits in classroom. This has led some researchers to conclude that classroom-based entrepreneurship learning is better at producing managers than entrepreneurs.

Having said that, there is no doubt that classroom-based entrepreneurship learning is an effective tool in increasing perceived feasibility of entrepreneurship for a number of reasons. First, classroom-based entrepreneurship learning teaches participants functional disciplines that are essential for starting and running a small business, including accounting, finance, marketing, management information systems and manufacturing skills (Deakin, 1996; Henry et al., 2005a). Second, classroom-based entrepreneurship learning is also found to be effective in providing skill
building courses, including negotiation and leadership (Soloman, 2007). These, according to Mitra and Matley (2002) and Jones (2007), are broad-based, transferable, and lifelong learning skills that also increases ones perceived feasibility. Third, classroom-based entrepreneurship learning provide participants an understanding of the rigorous analytical techniques required to set up a new business and an appreciation of the limitations of those techniques (Miller, 1987). It has been suggested that the cognitive approach of classroom-based entrepreneurship learning increases decision-making ability (Fiet, 2000b), as well as to help participants to acquire analytical thinking ability (Henry et al., 2005a), both of which are important for business start-up.

The above discussion points to the importance to create a more rounded environment for students that is favourable to their entrepreneurial learning. Contemporary learning theories, such as the theory of involvement, emphasise the active participation of the students in the learning process (Astin, 1999), which many argued is more suitable for learning entrepreneurship related subjects (Soloman, 2007).

*The Role of Entrepreneurship Summer School in Fostering Entrepreneurial Behaviour*

Entrepreneurship summer school is becoming increasingly popular in recent years. However, despite its increasing popularity, there appears to be very few studies discussing the scope of such training beyond technical and business skills acquisitions. Robertson and Collins (2003) study has discussed a number of skill-based advantages of entrepreneurship training camp, including the provision of broad frames of references, environmental knowledge and personal networks, as well as the development of analytical, interpersonal and structuring skills. However, the study did
not discuss in depth its additional value in relations to classroom-based entrepreneurship training and work experience programmes, particularly the role of environment in fostering innovation and creativity.

One apparent gap of classroom-based enterprise training that has not been filled by work experience programme is the use of what Gibb (2002) referred to as the conductive learning approach to encourage students to find and explore the wider concepts relating to a problem. This allows students to think independently of ways to overcome business and sector specific constraints, by seeking external sources of information and expert advices. Although such gap can partly be filled by participatory classroom-based training such as business plan development and off-curriculum activities such as student enterprise club, both have their limitations in terms of scope (see Table 1). Business plan allows students to identify potential opportunities and barriers, as well as to be aware of the issues that need to be resolved when starting up a business (Russell et al., 2008). However, as a traditional tool for venture capitalists and bankers to assess business proposals (Gibb, 1997; Wan, 1989), it does not reflect one’s true capability to start and run a business (Wan, 1989), and inhibit entrepreneurial response to subsequent changes in the environment (Gibb, 1997). Expert validation through work experience programmes can increase experimental knowledge of students (Walmsley et al., 2006, King, 1994), and provide a career laboratory to deliberately test the prospective occupation (Ducat, 1980), but the effectiveness of this type of programme in raising entrepreneurial intention and participation has always been questioned (Kwong et al., 2009; Thompson et al., 2008). For students who entered work experience programmes, the ‘entry shock’ can be so dramatic that it often produces out-of-proportion negative perceived desirability (Walmsley et al., 2006; Feldman, 1988), especially when they are only exposed to one
entrepreneur and are therefore more exposed to personality, behavioural, and sectoral differences.

Incorporating extra-curricular activities into the academic curriculum is getting increasing popular, with activities such as student enterprise club becoming increasingly widespread (Gartner and Vesper, 1994). Studies have shown that these activities are very important in increasing student’s intention in starting a business. They also foster creativity as well as to provide students with valuable experiences in trying out their business ideas. Such approach is consistent with previous research which suggests that the emphasis of enterprise education should be less about assessment but more about support (Colins and Robertson, 2003). Yet, due to work pressure, the lack of academic legitimacy (Levie, 1999) means that many students are reluctant to get involved in non-accredited after-school activities. On the other hand, to incorporate such activities into a formal academic curriculum is extremely difficult, due to resource and structural pressures. Although there have been calls for the use of less rigorous assessment process, for example, through the use of milestones (Ames et al., 2002), this is not always possible (for example in the UK) due to the fact that courses cannot divert from other academic programmes too much (Colins and Robertson, 2003), especially when it comes to the validation process.

The shortcomings of current entrepreneurial mediums in universities point to the need of a new type of programme that enhances behaviour orientated entrepreneurship learning through new learning environment, and entrepreneurship summer school appears to be the ideal solution for this. Entrepreneurship summer school provides a new environment that is dedicated to a particular learning objective allows students to spend considerable time and energy on activities that enhances their overall learning experience (Astin, 1999). As people are whole entities and domestic
Table 1. Advantages and Disadvantages of Different Entrepreneurship Learning Approaches

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<th>Advantages</th>
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| Classroom-based      | • Building technical skills  
                       | • Building personal skills  
                       | • Building analytical skills  
                       | • Inflexible structure that is not respond to external changes  
                       | • Limited creativity  
                       | • Minimal role in changing traits and personalities of individuals  |
| Expert validation    | • Enhance experiential learning  
                       | • Provide realistic expectation to students regarding entrepreneurship  
                       | • Limited exposure to different operating approaches  
                       | • Uni-directional learning with minimum contribution from students  |
| Extra-curricular     | • Obtain practical experience  
                       | • Foster creativity  
                       | • School environment discourages participation  |

Concerns inevitably influence work performance and vice versa (Heap, 1996), a new environment physically and symbolically removes people from their daily routine, and liberates them from burdens and limitations of everyday life (West, 2004). With the aid of some highly respected facilitators, consultants or business schools, such an environment generates a pleasant and comfortable atmosphere, in turns allowing participants to step back from the on-going day-to-day processes, examining and reflecting upon the appropriateness of existing ways of doing things, challenging the way they usually behave and introducing new ways of thinking (Johnson, 2008; West, 2004). In addition, a new environment also provides a platform for participants to challenge each others’ ideas, and allows differences to surface for constructive debate.
(Dunne, 2007). Furthermore, new environment provide a platform for individual to review their strengths, skills, weaknesses, problem areas, and future functioning being improved (West, 2004). Many companies and organisations strongly believed that events such as away-days ensure a team’s continuing effectiveness (West, 2004). In the UK, 1,700 listed companies spent an average of two days a year on away-days, amounting to 30 million working days in total (Dunne, 2007).

However, to create an environment specifically for learning is not without its problems. Johnson (2008) argues that learning that is detached from everyday life is likely to fail, due to the unchallenged nature of many of the ideas developed from such environment. The “pressure of the immediate”, such as everyday routines, often reverses participants to the old way of doing things. It has also been criticised that a short duration of environmental change is not adequate in changing behaviour permanently (West, 2004). Therefore whilst changing environment may provide a moment of inspiration for some, to maintain this inspiration and to carry it forward proves to be more difficult. There is a need for organisations to encourage participants to put what they learnt into practice (Heap, 1996), for example, by providing such training at a time where work disruption can be kept to minimum (West, 2004). One way of overcoming this problem is to have very limited aims and objectives that can be achievable in the short and medium terms (West, 2004). However, cost effectiveness remained a major issue with such programmes (Dunne, 2007).

The aim of this exploratory study is to examine whether entrepreneurship summer can provide an added-value to other entrepreneurship programmes that are already in existence, through providing a creative environment that allows students to develop their own business ideas, and, if so, how does this affects students’ perceived
feasibility and desirability of entrepreneurship, as well as their intention to start a business in the future.

Research Methodology

Whilst a quantitative approach provides valuable information, given the small number of participants, a qualitative approach that facilitates an understanding of the processes, rationale, subjective realities, complexities and context behind the students’ decision-making is adopted for this study. In-depth face-to-face interviews as well as focus group discussions were carried out with all camp participants who came from the UK (n=8). All participants were business students (two undergraduates and six postgraduates) who expressed interest in entrepreneurship by submitting a business proposal. All students received training on writing and developing business plan prior to the departure, and regularly attended extracurricular entrepreneurship events organised by the university, including student enterprise club, departmental seminars by academics, practitioners, policy makers, and motivational speakers.

Pre-departure interviews were conducted with all students on campus, en-route to the campsite and upon arrival. All students thought of entrepreneurship as desirable, although they were also keen on getting a well-paid and challenging job. All felt that they have obtained some start-up skills at university. However, they were unsure whether they have obtained all the necessary skills required to start a business, and whether their theoretically orientated learning can be applied practically.

The camp was held in a purpose build campus in central Finland. During the camp, individual and small group interviews took place in an informal environment during break time. Therefore the length of each interviews ranged between 10 minutes to an hour. In order to promote discussion and obtain “rich” (i.e. detailed) information about how each student perceive the importance of the training camp, an “interview
guide” (as suggested by Buchanan et al., 1988) rather than a more structured questionnaire was used. This consisted of a series of key questions, but with some prompts to help the interviewer probe further during the interview. This approach provided the flexibility to explore issues with the students being interviewed, but it also ensured key topics were covered (Greenbank, 2009). Two formal focus group discussions, each lasted between 1-2 hours, were conducted on the last and second last days of the camp. The study also relies on information provided by students in the learning log that they submitted after the camp. Finally, follow-up interviews were conducted with students after three and six months to examine whether changes made during the camp were sustainable.

A Summary of the Learning Programme

The “entrepreneurship boot camp” was a one week long training programme aiming to provide support to business students who have seriously considered starting their own businesses as an alternative to employment. The learning programme can be divided into three parts:

a) Idea formulation and development

Sessions were held at the beginning of the camp to help students to formulate ideas through brainstorming exercises, as well as an assessment of the opportunities arose as a result of the political, economic, social, technological and environment situation of the world in the forthcoming decades. The next stage involved consolidating and refining ideas. Students moved between groups to discuss and refine their business ideas based on advices received. As a continuous development process students were given discussion time everyday to discuss with fellow students, on-site-supervisors and visiting speakers. At the end of the camp students were required to complete a business plan based on their favourite idea, and competed in a
Dragon’s Dan style competition where winners were chosen based on their plans as well as executions (i.e. presentation).

b) Technical training

Technical training comprised of a number of skills sessions, including finance and budgeting, marketing, business growth, internationalisation, and human resource management. These sessions were generally followed by a workshop where students were required to relate these issues to their own business.

c) Motivational talks with entrepreneurs

In additional to technical training for starting a business, the organiser also invited four entrepreneurs to talk about their personal experiences. These entrepreneurs operate in very different sectors, and have very different profiles in terms of age, education and previous experiences. These talks were followed by a Q&A session allowing students to ask the entrepreneurs for more details as well as for to advice on their own businesses.

Effects of Entrepreneurship Boot Camp on Students’ Perceived Feasibility of Entrepreneurship

a) Effects on Business Ideas Formulation

There appear to be a change in attitude towards discussing business ideas with peers. Students all agreed that business discussions are crucial in idea formulation and development, which many of them felt they always knew but never realize the effectiveness of. A student said that:

At the beginning, some students were joking and playing around while others simply did not come up with good ideas. Nevertheless, as we rotated between groups, ideas began to evolve and something that began as a joke eventually became more viable. Sometimes we found that even within a bad idea there
are good elements that we can take out of, and sometimes elements from
different people can form new ideas.

Some students felt that the camp had helped them to overcome fears in expressing
their business ideas, which many had had problems with in the past. A student
described a number of factors that held her back on campus:

I do not normally like discussing my ideas with other people, because I have
no ideas how they would react. I would normally get very nervous, and feel
extremely embarrassed when people disagreed with me, or think that my idea
is not good enough. I also wonder if anyone would be interested to discuss
business with me…

Students felt that there are a number of reasons why they were able to express
themselves better in the camp environment. First, students felt that the key behind the
success was the encouraging approach of the instructors. One student said that:

In the camp, sessions were conducted in a light-hearted manner. We received
constant reassurance from instructors and visiting entrepreneurs that it is okay
to come up with any idea, as you never know which type of business can
become profitable… Though them, I realised that even running what people
perceived as average businesses with ordinary ideas can also be highly
successful. This reinforced the view that ideas do not need to be large, but
more importantly, to explore a niche market where no one has been before.

Second, students felt that it was beneficial to discuss their business ideas with like-
mineded individuals:

In the camp I felt it is okay to discuss, not just because the instructors said so,
but because everyone else was thinking of starting a business. I was therefore
certain that I was not talking to the wrong crowd. There were opportunities to
discuss business ideas in some of the entrepreneurship modules on campus. However, I doubt that most people would be seriously interested.

Third, students felt that the relaxing and friendly atmosphere provided an ideal environment for business discussions:

We were shown time and time again during the camp that even an ordinary idea can be highly successful... Therefore there was no pressure for us to come up with an amazing idea, but simply an idea that is workable and something that we enjoy working on for the duration of the camp.

Students felt that such an atmosphere fostered the type of creativity that was discussed by Jack and Anderson (1998) and Shepard and Douglas (1996), which is essential for idea formulation and development:

The relaxing atmosphere allowed us to discuss all kinds of ideas, wild ideas, ambitious ideas, unrealistic ideas, crazy ideas, etc... It is important to have a sense of humour as it facilitates pleasant discussions. It would be impossible to be creative if people are too serious, and I think the environment allowed all of us to take a more relaxing approach in our discussions.

**b) Effects on Skills and Knowledge Development**

Consistent with Soloman (2007), most students felt that these trainings had been extensively covered on campus, and the trainings that they received on campus were far more technical than those they received in the camp. Students were able to recall a number of existing modules on campus dedicating to marketing, finance, HRM and international business where theories in these areas were taught extensively. Students also recalled a module dedicated to technical training for business plan writing, and some students had chosen to complete a business plan as part of their degree. Students felt that, in pure technical term, what they learnt from the camp
alone is not adequate, and if they are to conduct a business plan properly, more technical knowledge from lecturers and textbooks are required. This is especially the case for finance and budgeting, where, without prior knowledge in the field, they would not be able to follow some of the sessions given by the practitioners.

Nevertheless, students felt that the camp helped them to connect theories with practices. Students found considerable discrepancies between what is in the textbooks and what actually happened in some of the small firms. Many students also realised that starting up a business is a lot harder than they first thought, and certainly less glamorous than they imagined in the first place. A student said that:

Running a small business is about getting your hands dirty, requiring hard work and persistency to make things happen. Due to cost and other constraints running a small firm is definitely much harder than I first thought… I have learnt to be more realistic and forget about the grand business marketing techniques because they won’t work in small businesses... I need to be more practical. One of the entrepreneurs, for example, outsourced just about everything whilst focusing just on marketing the product, whilst another one focused simply on marketing.

Talking to entrepreneurs also exposed students to different operating styles and principles. One student mentioned that:

Through talking to entrepreneurs I realised that there is no single way to start a business. Whilst conventionally nascent entrepreneurs possessed some ideas, skills, resources and contacts, one of the entrepreneurs who visited the camp started his company without any clients and even any person who could deliver his service in mind. He simply had a vague idea of the type of business that he wants to operate. This is in complete contradiction with what another
entrepreneur, who said: “do not start your business if you do not have enough clients”. I therefore realised that there are infinite ways of becoming a successful nascent entrepreneur.

Students felt that the camp provided them with a burst of entrepreneurial ideas in a short space of time, which allowed them to compare and contrast between different business approaches, and inspired them to choose a business strategy that is unique for their proposed business. They felt that this is something that cannot be provided in the school setting, where entrepreneurs’ seminars are held irregularly over a long period. Students felt that on campus it is very difficult to develop the right entrepreneurial mindset and to develop a lasting impact on their entrepreneurial inspiration, as the “pressure of the immediate” took over immediately after these seminars as Johnson (2008) suggested.

c) Effects on Business Plan Development

Students also found that advices from entrepreneurs were instrumental in developing their business plan. Whilst business plan training on campus focused on the theoretical and technical aspects of business planning, the learning sessions in the camp focused instead on innovation and creativity. Many students who are writing a business plan as part of their degree felt that while on campus they took a more cautious approach to ensure that their work satisfied the academic requirement of their programme. One student said that:

The business plan on campus, which is an assessed module, required us to consider whether the idea has been explored previously, whether data and information existed regarding product demand and market size, whether the measurements they adopted are conventional, and whether there is sufficient literature to back up the adoption of such ideas and measurements, etc.
Consequently students felt that they had no choice but to opt for safe and workable ideas that are often less interesting. In the camp they felt that they can approach business planning in a more creative manner.

Another notable difference between writing a business plan on campus and writing it in the camp is the reliance on entrepreneurs’ advices. Whilst inside the camp they found that the practical advices from entrepreneurs extremely helpful, on campus they tended to rely on their lecturers. This is because lecturers were the ones who marked their plans and therefore understood the marking criteria. On the other hand, since their business plan will be marked according to their academic rigour more so than their creativity and originality, they did not realise the benefit of discussing with entrepreneurs who regularly visited the university.

**Effects of Entrepreneurship Boot Camp on Students’ Entrepreneurial Intention**

**a) Immediately After Departure**

The camp appears to have no significant effect on students’ entrepreneurial intention. None of the student was planning to actively pursuing their business plan upon graduation. Instead, for those who were about to graduate, their priority was to find employment within large private corporations. Some felt that entrepreneurship would probably be their last resort if all other employment options failed, which some perceived as likely due to the current economic crisis. Even one of those who had been running a business suggested that if he could find a good employment opportunity, he would give up his business.

In the long run, some students mentioned that they will be using the idea that they developed for their future business. However, most mentioned that they would only do so if the opportunity to pursue it arises. They also felt that they need more
planning and more discussions with other people to explore the validity of their business plans. Therefore even if they came up with their business plans it is unclear at this stage whether they will be taking them further. This confirms with Johnson (2008) that learning needs to reflect everyday life as well as getting down to the “nitty gritty” or else the transferability of learning is likely to be low.

Nevertheless, the students felt that the main advantage of the camp is for them to be more aware of business opportunities around them, as well as the tools require to develop them further. Therefore, when an opportunity arises in the future, students are confident that they can come up with a viable idea that will be appropriate under the specific context at the time, as well as to develop it further.

There is no evidence to suggest that starting a business has suddenly becoming a more or less desirable option in the immediate future. All remained positive in their perception of entrepreneurship, although none of them has developed a burning desire to start or to expand business as a result of the camp. Instead some students felt that they have been on an exploration journey, and discovered both positive and negative aspects of entrepreneurship:

The camp gave us the opportunity to determine our goals in life, to examine both positive and negative aspects of becoming an entrepreneur… I am now fully aware that some product will not be an instant success. For example, one entrepreneur went really close to bankruptcy before landing a big deal with Subway (a major fast food chain)… I now know that running a business is not easy… it requires a lot of guts, determination and risk taking, and, even when it is successful it is often not as glorious as the media portrayed… but at least we now know what it is really like (some of barriers are) now.
Another student said that:

The camp gave us the opportunity to think about why we want to become entrepreneurs and what are the goals of our businesses? Is it about profit? Is it to fulfil our dreams? Is it to change the world? ... These are very basic issues about starting a business, it’s just that we never had the opportunity to think about them.

Nevertheless the problem identification process is accompanied by notable positivity in students’ attitude towards business challenges. A student said that:

As one of the entrepreneurs said, problems are opportunities, rather barriers, for the business growth. If they are viewed in this way, then business can identify effective ways to change and to respond. The change leads to success which would not be identified without the problem.

Even through none of the student are actively anticipating starting a new business upon graduation, some students have now set themselves a timeframe where their entrepreneurial ambitions can be achieved. For example, one student said that:

I consider accumulating experiences as an important step and therefore I would prefer to become an intrapreneur before considering starting my own business. I feel that at this stage my skills, knowledge and expertises is clearly inadequate and therefore after gaining a few years of experiences I will be more prepared to start my own business. I can foresee myself starting a business in the area of providing consultations and assistances to Latin American companies to export and to internationalise. At this stage I feel that I lacked skills and contacts particularly in the area of internationalisation and therefore I will target import-exporting companies in the future where I gain skills in this area.
Therefore, although the camp did not make entrepreneurship more desirable, it provided students with a platform to assess all the available information regarding entrepreneurship. This provides participants the opportunities to realistically reflect and assess on their life, and how entrepreneurship can fit into it based on their personal strengths and weaknesses.

**b) 3 Months After Departure**

Pressure of immediate does appear to take over, particular for the master’s students, as they were completing their final piece of coursework. Most of them were also applying for jobs, as they mentioned they would do three months ago. However, there appears to be little change in terms of participants’ attitude towards starting a business after 3 months. Students remained positive regarding entrepreneurship, and the possibility of engaging in entrepreneurship in the future. There also appears to be no change in terms of student’s perception of their own ability to start a business, and channels that can explore if they are to start a business. This is in contrast with some literature such as Johnson (2008), which suggests that short term environmental change does not have any lasting impact on learning and motivation.

**Discussion: The Role of Environment in Fostering Entrepreneurship**

Given the success of the camp in increasing perceived feasibility and understanding of the process of entrepreneurship, an important question to answer is whether the programme can be incorporated into their school curriculum. All students felt that the camp is something that they have not experienced on campus, and that they would welcome the incorporation of it into their university programme. Some suggested that the there should be a new module focusing on the business development process altogether, whilst others suggested that different elements should be incorporated into different modules, for instance, the idea formulation and
development processes into the creativity module. Likewise, students felt that practical knowledge in marketing, finance, internationalisation, and HRM provided by the entrepreneurs should be incorporated into respective modules, perhaps as seminars after discussing the theories in the main lectures. For undergraduate students where writing a business plan is not part of the curriculum, they felt that they have never devoted this amount of time to work on their business plan, and would definitely welcomed the idea of having it as an option. Nevertheless, some students expressed reservation as they fear that creativity will be suffocated as a result of incorporating the camp’s elements into their study programme. Alternatively, some students suggested that the camp should be incorporated into their after school activities, perhaps as a prized competition.

However, students certainly felt that being in a camp provide additional values. Being in a tranquil surrounding without any distraction, students felt that the camp successfully created an atmosphere where they can freely discuss their business idea amongst each others:

Here for the whole week your purpose is to talk about businesses. There are constant opportunities to discuss our businesses, not just within formal sessions but also during breaks and activity time. You don’t feel embarrassed talking about your business ideas, because you are meant to do so.

Another student said that:

Everybody is friendly, and everybody has been thinking about starting a business. For example, in the earlier sessions, we can discuss all sorts of ideas… the group here consists of people from different programmes that we hadn’t interact before… and the more you share the more ideas you can get and that there are people with different expertise’s that are more than willing
to help you and contribute with solid propositions regardless who you are or where you come from.

Some students felt that such an atmosphere is difficult to replicate on campus, due to the constant pressure of homework and other matters:

I found it impossible to discuss my business with anyone on campus. On campus people are doing different things, and I just don’t feel that many of my friends at school are keen on starting a business. They are more concerned with coursework deadlines, exams, their part-time job, job applications, and social life.

Some students also felt that they are being stigmatised when they discuss their business ideas:

When I talked to them about my business ideas I tended to get ignored… or very quickly some people changed topic… It makes you feel embarrassed talking about your business idea. I mean, in the UK we lacked this kind of culture… Actually some people do have business ideas but they are so protective of them that they would not reveal to anyone what they are.

Therefore, in order for the incorporation to be successful, there is a need to create an environment within the campus where a group of likeminded individuals can get together and discuss about businesses, for example, through a Student Enterprise Programme, with guidance from lecturers and entrepreneurs to ensure that they are not drifting away from their objectives.

**Conclusion**

Our exploratory finding suggests that entrepreneurship summer camp can be an effective tool in teaching the “art” form of entrepreneurship, which Jack and
Anderson (1998) and Shepard and Douglas (1996) felt cannot be taught in a classroom context. The camp environment facilitates communications between students, instructors, and entrepreneurs, which is extremely crucial in idea formulation and development. In addition, the format of the camp allows students to develop their own initiatives utilising on their personal strengths and weaknesses, so that they can develop a business plan that is most applicable for them. Furthermore, the camp’s environment takes students away from other distractions and focuses their mind purely on development business ideas. However, the importance of classroom-based entrepreneurial learning should not be overlooked, as without the foundation the students will not be able to absorb the practical knowledge provided by the entrepreneur speakers. The camp can therefore be seen as a complementary to the existing classroom-based entrepreneurship learning, as well as the more practical work experience programmes.

In terms of the effectiveness, this exploratory study found little evidence that entrepreneurship summer camp increase participants’ perceived desirability of entrepreneurship start up. Likewise, participants’ entrepreneurial intention remains largely unchanged. However, it appears that participants are now more informed about the attractions and obstacles of starting a business, and consider more seriously about how entrepreneurship may fit in to their long term future career plan.
Workshop for the ICSB 2010 World Conference, Cincinnati:

Bridging the gap between academic theory and business practice in the area of innovation: an example of entrepreneurship education initiatives across the curriculum

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The workshop shares a process undertaken for bringing practitioner developed and implemented methods for innovation and entrepreneurship from one part of the world to entrepreneurship education across the curriculum in a different academic and cultural setting. The workshop will present input that was obtained from entrepreneurs, researchers, educational professionals and policy makers that were exposed to the systematic search method for opportunity recognition, new product development, process and service innovation. Additionally, workshop participants will be exposed and will have the opportunity to comment on the curricular and extra-curricular activities being designed and tested for use across different academic programs.
The Venture Design Studio: A Design Thinking Approach to Teaching and Learning for the Conception, Communication and Innovation of New Venture Concepts*

By Alex Bruton

It has been said in recent years that little evidence exists to show that the business planning process enables entrepreneurial learning. This paper advances a design thinking approach to teaching and learning for the conception, design, characterization, prototyping, testing, pitching and innovation of new venture concepts. The curricular approach and the associated scholarly inquiry project are described, as are the encouraging results obtained as we have begun implementing the so-called Venture Design Studio as part of our renewed and now cross-campus entrepreneurship offerings. This includes an approach to assessment that facilitates student-led learning, engages experienced entrepreneurs as “choreographers” and results in the design of new venture models that are both highly innovative and highly feasible. The number of textbook stores and student-bars being proposed has been driven down in favour of significantly more ventures deemed to be highly scalable. Implications are discussed for the design of curricula that help students reach into and catalyze innovation within their local ecosystems.

Introduction

Educational Context and Challenges

Calls are being made around the world for new approaches to education (Owen et al. 2006; Guntram 2007) on the premise that we are part of an information society characterized by: technology-savvy students who learn more by absorption and experience than by reading a

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training manual or attending a course (Brown 1999); a shift in the focus of creativity from generating original content to the timely rip-mix-burn reshaping of existing content (Ito 2007); increasing requirements for interdisciplinary work carried out by teams across functional and institutional boundaries (Guntram 2007); new ways of perceiving and organizing knowledge in society (Weinberger 2005) and in the educational sector (Cunningham and Duffy 2000); and new forms of teacher and learner interaction enabled by innovative technologies and approaches to copyright (Dillon and Bacon 2006). And it is frequently argued that Web 2.0 technologies are causing a disruption in higher education much like those that took place or are taking place in the music, newspaper, book and television industries (Christensen, Johnson and Horn 2008; Tapscott and Williams 2010). In order to survive in the networked, global economy of the future, universities are being told to embrace collaborative learning and collaborative knowledge production (Tapscott and Williams 2010) and teachers are being encouraged to shift their practices from the traditional teacher-centered transfer of subject-area-focused knowledge to the development of resources and practices that teach students the skills required to learn, collaborate and build knowledge on their own (Owen et al. 2006; Guntram 2007).

National and Regional Motivation

The Council of Canadian Academies (2009) has indicated that “Canada’s poor performance in respect of innovation is due to the prevalence of business strategies that do not emphasize innovation as a key competitive tool,” and its president has said (Nicholson 2009) that “how to teach this is perhaps the greatest challenge and opportunity facing educators in the 21st century.” Alberta’s Value Added and Commercialization Task Force recently recommended actions (Martin 2007) for overcoming a reliance on commodity resources and assuming a leading role in the global knowledge economy. Their report heavily informed today’s Alberta Action Plan.
and emphasized the roles that universities need to play in order to create the "ideal training ground and launch pad for [the] new entrepreneurs who will help shape Alberta's economic future and sustainable growth."

**The Entrepreneurial Education Context**

At a time when the field of entrepreneurship is debating and seeking its own legitimacy (Katz 2008) and charting its path forward (Kuratko 2004) and when many researchers, such as Kuratko (2004), Alberti, Sciascia and Poli (2004) and Pittaway and Cope (2007), are seeking to better understand and advance the role of entrepreneurship education, we suggest that there is no discipline in which the shifts described above are more relevant than in entrepreneurship. And as those calls for change are being made, debate about and research into how to best teach entrepreneurship continue to be wide-reaching and extensive (Alberti, Sciascia and Poli 2004; Pittaway and Cope 2007) and there are questions as to whether the business school is the best place to teach entrepreneurship (Gibb 2002; Kirby 2004). In addition, questions persist about the appropriateness of traditional approaches to learning how to conceive of and start successful new ventures. For example, despite the ubiquity of the business planning process in entrepreneurship education (Honig 2004) and typically high levels of excitement about its use as a teaching method (Roldan et al. 2005), little evidence exists that the business planning process helps student entrepreneurs learn (Honig 2004) (even if it might have other benefits in a new venture setting as suggested by Delmar and Shane (2003) and others).

**This Study**

**Aim and Central Questions**

This paper is written in direct response to the challenges outlined above. The main purposes are: 1) to introduce the Venture Design Studio (VDS), a novel approach to teaching and learning
for the conception, design, characterization, prototyping, testing, pitching and innovation of highly innovative and highly feasible new venture concepts; and 2) to report on work taking place in order to add a level of rigorous scholarly inquiry to what is happening in our classrooms and at their interface with our regional entrepreneurial ecosystem. Since an early pilot of the VDS took place in the September 2008 semester as part of our entrepreneurship curriculum renewal project, we have felt that the approach may have advantages over a traditional textbook or case-based course, business planning process and competition, and other modern approaches to entrepreneurial teaching for similar learning outcomes. However, despite having had this anecdotally-informed gut feel up to this point, we had not been able to rigorously describe what happens when students learn in this way, to understand how exactly learning takes place in this way, or to make an evidence-based claim about whether and in what ways the approach might be better suited than other methods. The aim of the work being reported here is to take a step toward answering these questions in a way that can be generalized for use by teachers, learners, practitioners and researchers. The central questions at this stage of the research are:

1. How well does the concept of design thinking lend itself to teaching and learning for new venture conception, communication and innovation?

2. What happens when people learn to conceive of, characterize, design, prototype, test, pitch and innovate models of new ventures that are highly innovative and highly feasible in an experiential, authentic and computer-supported design environment?

The Experiment, Data Sources and Methods Used

The VDS is an authentic and highly experiential 12 to 16-class activity that is iterative in nature and makes up over half of a new first-year undergraduate course called The Entrepreneurial Experience. Students from across campus work in teams of four (of their
choosing) to design, represent and pitch new venture concepts. As has been mentioned, their objective is to develop a venture concept that is both very innovative and very feasible - a combination they find out quickly is not easy to achieve. Every three classes they draw on custom topic materials, submit and share their ventures through a collaborative web environment (a customized wiki), do a videotaped elevator pitch in front of a panel of experienced entrepreneurs, and assess their own performance. The whole experience builds to a final competition at which students from each class go head to head and only four (of between 100 and 160) students have their submission crowned the venture with the highest potential value.

A wealth of data was collected for the study using the collaborative web environments created by over 120 students in four classes. These include: student surveys; videotaped elevator pitches and snapshots of their written work (available at each of four design iterations as learning took place); and reflections and self-assessments (also available at each iteration).

The second of the above central questions is a “what is question” meaning that we seek to more fully understand what is happening for students throughout the learning process (Hutchings 2000). Although the results of a quantitative survey are available, the methodology at this stage of the research has involved more of a phenomenological approach (Creswell 2009) in which qualitative methods are being used to describe and systematically analyze the student experience and learning outcomes throughout the learning process.

**Background**

**The Design Thinking Hype**

It has been suggested in recent years that the process of innovation should be modeled on the concept of *design thinking* (Dunne and Martin 2006; Brown 2008), and this has gained a lot of attention in the popular press; whether business people read *Fortune, BusinessWeek*, the New
York Times or Fast Company, for example, they are being told that design thinking is the new driver of innovation, a new competitive weapon, and a means of unlocking breakthrough ideas. But despite this attention, the idea of applying design approaches to management remains largely undeveloped (Dunne and Martin 2006), and a review of the academic literature yields a lack of generalizable data-informed studies that can speak to how well design thinking works when applied to the innovation process. In other words, other than the sometimes-recurring cases described in the above-mentioned publications and popular press articles, it is not clear whether and in what situations modeling the process of innovation on design thinking would improve an individual or a firm’s capacity to innovate. This conclusion has also been reached by Jahnke (2009) who describes his forthcoming work which promises to provide some empirical evidence.

Having said all this, it behoves the forward-thinking business educator not to ignore the hype until enough such evidence is available. After all, we have heard many times in many ways that design boosts innovation. For example: strategic management, design management and innovation management scholars have long suggested incorporating design early and throughout many stages of management to increase and accelerate innovation (Kotler and Rath 1984; Borja de Mozota 2003; Trott 2005; Chhatpar 2007); innovation scholars have urged innovators not to ignore the design process (Verganti 2006; Utterback et al. 2006); and management scholars advise us that design strengthens innovation generally, and leads to greater profits (Slywotzky et al. 2002; Boland and Collopy 2004). And whether sufficient empirical evidence exists or not, it is hard to expect our students or the entrepreneurs with whom they work to ignore the appeal of the many books and journal articles being published today about the use of design thinking techniques for achieving innovation (Beckman 2007; Johansson and Woodilla 2009; Martin 2009; Brown 2009).
Design Thinking for Business Education in North America

Design and design thinking are the topics of several recent articles predicting or calling for a shift in how business schools offer their services. For example, Cooperrider (2008) suggests that “future business schools will look more like design schools – alive with design studios, interdisciplinary teams, and rapid prototyping – where managers act as designers who recognize disruptive, unexpected innovation opportunities.” And it is reported in Dunne and Martin (2006) that Toronto’s Rotman School of Management website says that “we are on the cusp of a design revolution in business,” and as a result, “today’s business people don’t need to understand designers better, they need to become designers.”

Despite these calls for change, design thinking is only evident today in a small number of educational programs in North America, with only a few of them at the undergraduate level (Weightman 2009). The following are cited as examples by Weightman (2009): the D-School at Stanford University (cross-disciplinary course offerings including design thinking); the design department at Carnegie Mellon University (undergraduate and graduate design programs with links to the MBA in the business school); the Institute of Design at the Illinois Institute of Technology (dual degree in design and MBA, as described further in Alexis and Hassan 2007); the Segal Design Institute at North Western University (masters combined with MBA); and the University of Toronto’s Rotman School of Management (MBA stream). And although there are few institutions offering design thinking at the program level, it should be noted that some educators are looking at teaching design thinking at the course level in the fields of engineering (Dym et al. 2005), information systems (Wang and Wang 2008), and business (Ungaretti et al. 2009).
Design Thinking for Entrepreneurial Teaching and Learning

We are not aware of any prior work done to implement a design thinking approach to teaching and learning within an entrepreneurship program, but it is important to note the work of Duening (2008) in which a theoretical framework was advanced specific to the challenge of developing curricula for teaching entrepreneurship. Based on the “five minds for the future” approach of Gardner (2007), Duening proposed five “minds for the entrepreneurial future” meant to provide an intellectual foundation for entrepreneurship education and curriculum development. One of these was a so-called “designing mind,” for which the following curricular approaches were recommended (Duening 2008):

- Design thinking is inherently interdisciplinary and combinatory. Students should be challenged to work on projects that require multiple perspectives to achieve acceptable outcomes.
- Designing requires relentless prototyping. Students should be taught to review their ideas with trusted others for feedback that results in evolutionary and incremental improvements in their original concepts.
- The outcome of design is a narrative or story. Students should be encouraged to review an entrepreneurial venture and develop a compelling story about it to share with others.

We also note the work of Jacoby and Rodriguez (2007) who share the belief “anyone pursuing innovation, given the right training and mindset, can think of him or herself as a designer.” It is with these comments and the work of Duening (2008) in mind that we set out in early 2008 to implement a design thinking approach to teaching and learning for the conception, communication and innovation of highly innovative and feasible new venture concepts.
Results: A Tour of the Venture Design Studio (VDS) Curricular Landscape

As described earlier, the VDS is an authentic and highly experiential 12 to 16-class activity that is iterative in nature and makes up over half of a new first-year undergraduate course in entrepreneurship. To introduce and fully describe the VDS in the sections that follow, we will use the map of the curricular landscape that is shown in Figure 1. This map was proposed by Bruton (2010a) to contain the essential elements that shape the design and intention of an entrepreneurial curriculum, and to highlight the various domains of research and scholarly inquiry important to a SoTLE project. It can also be thought of as a map that describes the curricular landscape at the program, course and topic levels.

Why Does This Kind of Learning Need to Take Place (Figure 1a)?

As shown in Figure 1a, the first point on the map of the landscape prompts us to answer the question of why the learning needs to take place at all. This was addressed early in our curriculum development process (and in the Introduction to this article). Very broadly speaking, the VDS was designed to help meet the needs and respond to the calls for change within higher education and to the roles of entrepreneurship programs within our regional ecosystems and the lives of our students. It provides an example of how collaborative learning and collaborative knowledge production are being embraced at our university, as has been urged by Tapscott and Williams (2010), and, as such, it has required of our teachers a shift in their practices from the traditional teacher-centered transfer of subject-area-focused knowledge to the development of resources and practices that teach students the skills required to learn, collaborate and build knowledge on their own, as has been called for by Owen et al. (2006) and Guntram (2007). At the regional economic level, the VDS contributes to meeting the demand for highly qualified personnel within our regional innovation ecosystem; it is part of our ongoing and very deliberate
attempts to create the ideal training ground, launch pad and network into the ecosystem for the new entrepreneurs who will help shape Alberta's economic future and sustainable growth, as called for in Martin (2007) and Government of Alberta (2010). Generally from a scholarship standpoint, the inquiry we are carrying out as part of the delivery of the VDS has been designed to help meet the need for generalizable answers to questions about how to best teach entrepreneurship, as called for in Kuratko (2004) for example. Specifically, we hope that this work will help educators answer questions about how best to teach students to conceive of, communicate and innovate highly innovative and highly feasible new ventures. The general need for this can be found in many publications including those referred to in Kuratko (2004). Above all else, we have been guided throughout our curriculum renewal process by a vision of providing our students with the best, most relevant learning experience possible. It has been our goal to design and create a curriculum that provides an intense, immersive and challenging entrepreneurial learning experience like no other in North America during which students can pursue their passions and gain experience relevant to their lives and careers. The VDS is a key component of our plan to meet this vision.

Who Are Our Learners (Figure 1b)?

An articulation of an in-depth understanding of who your students are is the second point on the landscape, shown in Figure 1b. Mount Royal University is an undergraduate university with over 13,000 students and offers four-year degrees in disciplines such as arts, science and technology, communication, business, health and community studies, and teaching and learning. The course in which the VDS is offered is the first course in our new minor and it is available to students in any discipline of study across campus as part of their General Education requirements. As such, students going through the VDS have varied interests, backgrounds and
experiences, and may not have taken any previous course in business. Their average age is 20
years old and this is usually their first exposure to entrepreneurship.

Figure 1: Map of the SoTLE Landscape (Bruton 2010a; adapted from O’Brien 2008 and Alberti et al. 2004)
What Defines Success – Learning Objectives (Figure 1c)?

As shown in Figure 1c, the learning objectives, or desired learning outcomes, are the next stop on the landscape. Overall, the VDS aims to contribute to the course goal of providing students with an authentic experience and a taste of what it is like to be an entrepreneur. The specific student learning objectives for the VDS are:

1. To experience forming and working with an entrepreneurial team;
2. To collaboratively create new knowledge in the form of a prototype new venture model;
3. To access appropriate internal and external value networks in order to test the venture model and offering(s);
4. To present the outcomes of the earlier three objectives by communicating the value of the underlying new venture concept in an elevator pitch;
5. To innovate the venture concept such that is judged to be both highly innovative and highly feasible; and
6. To learn about themselves and their personal practices as entrepreneurs.

What Must Be Learned – Not Just Content (Figure 1d)?

As shown in Figure 1d, the fourth point on the curricular landscape has to do with defining what will be learned. As discussed in O’Brien (2008), it is important that this is not just limited to defining content and, as proposed in Bruton (2010a), it is better if content definition is left until last in favour of first considering the core constructs, types of knowledge and fundamental elements being imparted to the students. This is done here for the VDS.

Core Constructs. To meet the objectives of the VDS outlined above, students must tackle two core constructs: 1) what is the entrepreneurial business model as defined by Morris,
Schindehutte and Allen (2005) and others referenced therein; and 2) how does one carry out business model innovation as defined by Markides (2006) and Chan and Mauborgne (2005). In other words, we are requiring that our students learn to conceive of, characterize, design, prototype, test, pitch and innovate models of new ventures. We use the term venture model throughout the activity (rather than business model, for example) to emphasize that students are encouraged to do this for any type of new venture, including for and not-for profit ventures and those within new and existing organizations. We distinguish this from the term venture concept because we see the venture model as an articulation and prototype of a venture concept.

Types of Knowledge. A major element that sets the VDS curricular design apart is the kind of knowledge the students need to master in order to achieve the objectives. We target functioning knowledge, which is defined by Biggs (2003) as knowledge within the experience of the learner that is based on a performed understanding. This is shown at the top of Figure 2 along with the other types of knowledge he tells us our curricula might address. In other words, a student cannot succeed in the VDS without the going through learning that takes place as one actually designs and innovates a business model. As Biggs (2003) tells us, mastering this kind of functioning knowledge also requires that the student goes through the learning required to develop a solid foundation of knowledge about business models and their innovation (declarative knowledge), to carry out the associated procedures or enact the required skills (procedural knowledge), and to know when, why and under what conditions to use the other types of knowledge (conditional knowledge). And so it becomes our job as designers of the curriculum to provide an authentic learning environment in which the student can learn from experience and gain all four types of knowledge about business models and their innovation.
Fundamental Elements. Speaking about ways of thinking and practice, O’Brien (2008) points out that it is generally accepted “across the academy that knowledge is itself a construction of particular social and cultural communities (Berger and Luckmann 1967) and that all such communities orient to the specific and shared aims, activities and ways of achieving them that comprise and make distinctive that community (Wenger 1998).” The community of entrepreneurs that our students join before and after graduation is most certainly no exception to this. We have tried therefore to articulate and build into the VDS curriculum the relevant ways of thinking and practice common to successful entrepreneurs. As they go through the VDS, we have seen evidence of students adopting the following ways of thinking and practice for example: thinking about challenges as opportunities to create value; seeing oneself as an agent of change; accepting and even yearning for criticism; tolerating ambiguity; and being open to taking risk.

![Diagram of knowledge types](image)

**Figure 2: Relationships between Different Types of Knowledge (after Biggs (2003))**

According to O’Brien (2008), threshold concepts are concepts that:

- Represent fundamental ways of thinking and knowledge within the field;
- Are transformative, in that learning about them changes the way students think about the phenomena or area of application; and
- Once understood open up a deeper level of thinking that in turn affords access to other important concepts within the field.
Examples of threshold concepts we see evidence of students learning in the VDS include: that a group is different from a team; that having “skin in the game” is usually a condition for greater success; and that in the eyes of an investor one’s experience and passion can be more valuable than one’s venture idea. Also according to O’Brien (2008), troublesome knowledge is a kind of transformative knowledge that “brings into view aspects of troublesomeness that are less about difficult concepts and more to do with the challenges inherent within a change to one’s inner landscape, perspective and worldview (O’Brien 2008; Perkins 2006).” In entrepreneurial learning, threshold concepts and troublesome knowledge seem to have been addressed in the context of learning from ‘critical events’ that cause one to question previously taken-for-granted beliefs and assumptions (Deakins and Freel 1998; Cope and Watts 2000; Cope 2003), and to reframe one’s understanding to create a shift in mindset (Applebaum and Goransson 1997). We have made room for this type of learning in two ways in the VDS. First is through the nature of the authentic and experiential curriculum design, outlined in more detail below. Second, as Cope (2003) suggests, is through opportunities for critical self-reflection that have been built into the learning process in order to encourage this sort of higher level of learning and capture it when it occurs. We have seen evidence of students gaining troublesome knowledge in the VDS as a result of: the breakup of an entrepreneurial team; seeing a good idea receive support because it was pitched more convincingly than a great idea; recognizing and being tempted by the perceived gains that would come from misrepresenting their work; and receiving conflicting advice from two equally accomplished and well-respected entrepreneurs.

**Content.** Custom content was developed for the VDS in four areas of focus shown in Table 1. Even though we require our students to get all the way up to a functioning understanding of the core concepts (recall Figure 2), we have selected the content in Table 1 so
as to favour breadth over depth; the idea in this first undergraduate course in entrepreneurship is to provide just enough depth for them to innovate on a venture model while providing the breadth required to be authentic to the experience.

<table>
<thead>
<tr>
<th>Iteration</th>
<th>Design goal</th>
<th>Topics and content</th>
</tr>
</thead>
</table>
| 1         | What value will you create and for whom? (factors related to the offering, market and team fit) | Who’s your target customer?  
• customers, buyers and users; pre-adoption use case; want, need or “should” being met; individuals vs. markets; size and trend  
What’s your economic offering?  
• commodity, good, service, experience; mixes of offerings; features of your offering; related offering(s)  
What’s your value proposition?  
• benefits vs. features; costs; value; value proposition; articulation using a value curve  
Team, experience, specific knowledge and fit  
• team members; experience; general and specific knowledge; team fit with proposed venture |
| 2         | As above +  
How will you create the value? (factors related to industry structure and internally derived competitive advantages) | Internal value chain  
• generic internal value chain; your internal chain; what/whether to outsource  
Key strategic resource(s)  
• resources and capabilities; valuable, rare, costly to imitate, used by the organization; key strategic resource(s)  
Industry value chain  
• generic industry value chain; your place in the chain; your specific value network |
| 3         | As above +  
What is your competitive strategy? (factors related to competitive landscape and strategic position) | Types of competition and competitive landscape  
• direct competitors, substitutes, alternatives; your competitive landscape;  
Generic strategic position  
• broad, focused; your cost structure; low cost, differentiated; your strategic position; same for competitors |
| 4         | As above +  
How sound is your economic logic and look-ahead? (factors related to economic logic and the ask) | Economic logic  
• direct costs; burn rate; purchase price; bottom-up sales forecast; breakeven; adjusting your venture model  
Look-ahead  
• what does first revenues look like; investment required to get to first revenues; the ask |
Naturally, this content gives rise to a number of topic-level learning objectives relating to the declarative, procedural, conditional and functioning knowledge being gained. These, the full content and all of the resources for the VDS can be accessed freely at Bruton (2010b).

**How Do We Enable the Learning (Figure 1e)?**

The section of the curricular landscape shown in Figure 1e speaks to how we enable the learning that has been defined above. This includes clearly articulating the nature of the teaching and learning activity itself, recognizing the roles that teachers and learners need to take to make it happen, and identifying the dominant metaphors and theories of learning.

**Structure and Nature of the Activity.** It was at this point in the curriculum design that we turned to the recent discussions about design thinking for innovation and began a process that eventually yielded the Venture Design Studio framework shown in Figure 3. This studio-based teaching and learning activity models the innovation process on the concept of design thinking as proposed in (Dunne and Martin 2006; Brown 2008). As shown in Figure 3a, the Venture Design Studio takes place over four iterations spread over a ten week period. Additional content and new design goals are presented to the students at the start of each iteration (recall Table 1), along with additional assessment criteria (to be discussed later). Each iteration is comprised of three scheduled lecture hours, as shown in Figure 3c, and implements a curricular “design for learning” for students graduating into today’s global society and knowledge economy (Selander 2008). As shown in Figure 3b and c, this means that: 1) in the first class of an iteration the stage is set, tasks are described and goals are clearly articulated; 2) between the first and third classes the students go through a process of forming and transforming knowledge (referred to in class as creative jamming) and representing their work in a collaborative website (custom wiki) that is visible to the whole class; 3) during the third class they present their venture models in an
elevator pitch to a panel of external judges and, together with the judges, do some meta-reflection on the product; and 4) shortly after the third class they do some personal reflection on the learning process and their personal practice. As shown in Figure 3a, they also reflect on their learning personal practice at the end of the course as part of a personal practice project.

This process for learning to conceive of, characterize, design, prototype, test, pitch and innovate new venture models is true to the concept of design thinking which, as Brown (2008) tells us, results in creative and innovative breakthroughs not just as a result of brilliant minds and lightening strikes but as “the result of hard work augmented by a creative-human centered discovery process and followed by iterative cycles of prototyping, testing and refining.” In that
spirit, we encourage and enable our students to: act as designers; follow passions; seek inspiration; immerse themselves in and see the real world; brainstorm; look for patterns; seek help, criticism and user input (especially in the prototype stages); embrace failure and start over if necessary; and build their ideas iteratively.

Teachers’ and Learners’ Roles. As recommended by Selander (2008) the teacher is required to intervene and facilitate throughout this type of learning process, clarifying concepts, encouraging where possible, and highlighting signs of learning. We have observed top performing student teams shift from positions 1 to 2 to 3 in Figure 4 for example; consistently, top teams are involved in and direct their own learning. And teachers have had to do their part by shifting their practices toward true facilitation, delegation and consultation to the process.

![Figure 4: Roles Required of Teachers and Learners (after Grow 1991) in the Venture Design Studio](image)

Theories and Metaphors of Learning. Figure 5 provides a sketch of the curricular context for the VDS. It takes place in the first course, called The Entrepreneurial Experience, which is in Phase 1 of the minor. As shown, we think of the learning taking place in that phase through the lenses of the constructivism and social constructivism learning theories. Social constructivism is
a process of learning through working with others, whereby knowledge and meaning are collaboratively constructed by team members (Marshall 1996; O’Brien 2008). Because of the nature of the design of the VDS, the teacher needs to think in these terms. Unlike many approaches to teaching and learning entrepreneurship, which are based on knowledge-acquisition and participation metaphors of learning, teachers in the VDS environment view learning more as a process of knowledge creation for innovation as described in (Paavola and Hakkarainen 2005).

Figure 5: A Sketch of the Curricular Context for the Venture Design Studio
We view the latter point as important because, unlike the acquisition and participation metaphors which focus on adopting knowledge individually or in groups, the knowledge creation metaphor of learning focuses on creating and developing new material and conceptual artifacts (such as business models), and on conscious advancement, discovery and innovation (Paavola and Hakkarainen 2005). This distinction is important given the nature of entrepreneurial learning and its importance in today’s knowledge-based economy and society.

**How Well Has the Learning Taken Place – Assessment (Figure 1f)?**

As shown in Figure 1f, the last stop on the curricular landscape speaks to how well the learning has taken place. This includes assessment of learning outcomes and the products of the learning.

**Assessment.** The assessment strategy for the VDS was very carefully designed using the notion of constructive alignment. As described in Biggs (2003), this means that the learning activities, the assessment methods, and the learning objectives are all consistent with and supportive of each other. We have also taken care to ensure they are consistent with the ways of thinking and practice of successful entrepreneurs. Constructive alignment is often a challenge to achieve in entrepreneurship where it is not at all unheard of to find complete misalignment. For example: a teacher lecturing on business planning (the learning activity) and the students delivering a business plan (to be assessed), all with the hope that the student will be able to one day start their own business (the actual learning objective). As such and in order to support the learning objectives defined earlier, we defined the assessment schedule shown in Table 2. Students are assessed at the end of each iteration in four different ways: 1) by their teacher playing an advisory role; 2) by a panel of two to three experienced entrepreneurs playing the dual role of potential investor and advisor; 3) by themselves as nascent entrepreneurs; and 4) by their
peers playing the role of shareholders. This provides them with a wealth of constructive and formative feedback every iteration that is quite authentic to what a real entrepreneur would receive over time. As shown in Figure 3 and Table 2, only the feedback from the last iteration is used as a summative evaluation. We note that the students are not assessed directly on the quality of their pitch. Rather, the elevator pitches are assessed in exactly the same way as the prototype venture models (using the rubrics in Table 3 and Table 4 which are based loosely on the work of Fiet and Patel (2006)). This has kept the focus of the pitch on the potential value of the venture and how to communicate that value clearly and convincingly. Interestingly, it has not precluded the teaching and learning of best practices in how to do an elevator pitch but, rather, has encouraged the students to seek out those practices on their own, experiment with different combinations that may be appropriate to their situation, and learn from each other.

All of this feedback is provided to the students at the end of every iteration through the same collaborative website the students use to develop and submit their work. Because every team can see the work submitted and feedback received by every other team, they learn from each other between iterations.

**Products of the Learning.** Finally, we share what has turned out to be a very powerful assessment-related tool for communicating with and motivating the students when providing them with feedback. Because the rubrics in Table 3 and Table 4 have been designed to speak to the innovativeness and feasibility of their venture concepts, respectively, it is possible to determine the relative positions of their ventures in each of these dimensions. In turn, it is possible to graph the relative positions of all the venture concepts in a class, as shown in the example in Figure 6a. We create two such plots after every iteration: one based on the assessment of the prototype venture models submitted through the collaborative web site and one
based on the judges’ assessment of their pitches. Students and teachers both report how this serves to focus the whole venture model design process around getting ventures into “the top right corner” of Figure 6a; the common goal quickly becomes the iterative design of venture concepts that are both highly innovative and highly feasible. This has had the effect of driving down the number of used textbooks stores and student-bars being proposed and significantly increasing the number of ventures that are deemed to be highly scalable with solid potential for growth; students tend to either select a new concept or find ways to make their concepts more innovative. They report feeling safe doing this because of the trusting and collaborative environment that develops and because only the last iteration counts toward their grade. This trend can be seen by comparing Figure 6a with Figure 6b.

Table 2: Assessment Done At Each Iteration of the VDS

<table>
<thead>
<tr>
<th>Type</th>
<th>Assessment</th>
<th>Contribution to mark</th>
</tr>
</thead>
</table>
| Teacher (as advisor) | • The teacher assesses the students’ new venture model based on their collaborative web site  
• The rubrics in Table 3 and Table 4 are used | These three components are worth an equal amount and together make up the VDS total of 35 percent of the final grade in the course |
| Judges (as advisor/investor) | • A panel of external judges assesses the students’ new venture concept based only on their elevator pitch  
• The rubrics in Table 3 and Table 4 are used again | Full feedback is provided every iteration but only marks received in the final iteration count toward the final grade |
| Self (as nascent entrepreneur) | • Each student assesses his or her own learning against four outcomes:  
• Entrepreneurial toolset outcomes;  
• Network, team and communication outcomes;  
• Collaborative knowledge creation outcomes;  
• Personal mindset and entrepreneurial identity outcomes.  
• Rubrics like the one in Table 5 are used for each of these categories | Provides a bonus mark in the course: 1 percent for each investment made in the winning venture |
| Peer (as shareholder) | • Every iteration the students vote individually for the venture concept they think will win |                                                                                       |
**Table 3: Assessing the Innovativeness of a New Venture Model**

<table>
<thead>
<tr>
<th>The venture's offering is very dear to me and presents a compelling value proposition to the buyer/user</th>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

For this type of venture the following are true:

1. The buyer and user are very compelled by the offering - the venture has identified a very significant "need", "want" or "should"
2. The offering is very clearly articulated - I have no questions about the commodity, good, service or experience
3. The buyer is encouraged to make a decision to purchase
4. Price, switching and adoption costs are small relative to the buyer's overall costs

<table>
<thead>
<tr>
<th>I believe the venture's choice of customer (buyers and users) could lead to significant value creation</th>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

For this type of venture the following are true:

1. There is a very large number of potential buyers and users
2. The number is growing significantly
3. Buyers have appropriate financial capability
4. Customers are not likely to backwards integrate (i.e. not likely to become a competitor of the venture)

<table>
<thead>
<tr>
<th>I believe the supply situation is very favorable</th>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

For this type of situation the following are typically true:

1. It would be very easy to switch suppliers, e.g.
   - There are many possible suppliers ventures like theirs could choose from
   - Suppliers are providing undifferentiated materials
2. And/or, suppliers are motivated to supply to the venture, e.g.
   - There are few other buyers; the venture promises to sell in large volumes; the venture has developed a unique relationship with its supplier
3. Or, ventures in the industry do not depend highly on suppliers, e.g. in a consulting industry
4. And suppliers are not likely to forward integrate (i.e. not likely to become a competitor of the venture)

<table>
<thead>
<tr>
<th>I believe the venture's strategic position would lead to significant value creation</th>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Although there are exceptions, a new venture of this type typically:

1. Has a very highly differentiated position or represents a low-cost leadership position relative to others in the industry
2. Starts off focused, i.e. targets a niche at first, and plans to target a broader group of customers over time
3. Has few competitors, substitutes and alternatives sharing the same strategic position

*Alex Bruton, ICSB 2010*
Table 4: Assessing the Feasibility of a New Venture Model

I believe the team’s fit with the proposed venture will lead to significant value creation

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

For this type of team and venture the following are true:
1. I have been told enough about the team members to make a reasonable assessment
2. The team inspires my confidence and I would invest in all of its members
3. Team members have relevant prior experience (jobs, education, social relationships, hobbies, etc...)
4. That experience provides them with relevant specific knowledge (people, places, timing, circumstances, technologies, etc...)
5. It is clear that their specific knowledge forms the basis of their venture’s offering

I believe the venture has one or more key strategic resources that are valuable, rare, and costly to imitate

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
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</table>

For this type of venture the following are true:
1. The team/venture brings at least one key strategic resource to the table with the potential to provide a significant competitive advantage, e.g. physical, financial, team members, offering (good, service, experience), reputation, technology, raw materials, geographic locations, specific know-how, etc...
   • This key resource is valuable, rare and costly for others to imitate
2. No (or very few) other ventures possess the same key resource(s)
3. Other ventures would find it too costly to acquire the same key resource(s)
4. It is hard to find a substitute for its key resource(s)

I believe the venture’s competitive situation is very favorable

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
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<tbody>
<tr>
<td>0</td>
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</table>

For this type of venture the following are true:
1. The team has provided a sufficiently realistic picture of the competitive landscape and there are no omissions in their analysis
2. The venture has a significantly different value proposition from that of its direct competitors
3. The benefits do not outweigh the costs of substitutes and alternatives

I believe the breakeven numbers are sound and the plan to develop a prototype is a reasonable next step

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

For this type of venture the following are true:
1. Indicators like the following seem consistent with the venture and industry, and seem to be based on reasonable assumptions:
   • The price to the customer; The sales needed to breakeven on direct costs and burn; The sales forecast; The gross margin or gross margin percentage
2. The proposed prototype or trial would help them get to first revenues
3. The money requested is in the right ball park for getting to the prototype stage

Alex Bruton, ICSB 2010
Table 5: Sample Student Self-Assessment

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
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<tr>
<td>3</td>
<td>7</td>
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<td>4</td>
<td>6</td>
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<td>6</td>
<td>4</td>
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<td>7</td>
<td>3</td>
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<tr>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

I have demonstrated an excellent understanding of the entrepreneurial toolsets we learned in this iteration.

Pick and describe at least 2 specific examples that show you what you learned this iteration and why you deserve the grade you gave yourself above:

This might help:

1. In this iteration you had to learn and apply the tools in the following topics: 1) Team, specific knowledge and alignment; 2) Who’s my customer?; 3) What’s my economic offering?; and 4) What’s my value proposition? You used these to come up with the seed of a new idea. And you learned about pitching.
2. People with a high grade in this area are able to provide:
   a. Examples of what you know now that you didn’t know before
   b. Recognizing how you learned and how that ties back to your learning styles
   c. Learning about the concepts on your own time, ahead of the classes in which they were used
   d. Learning about the steps and procedures required to implement each topic
   e. Understanding how the topics work together to help you come up with an idea for a new venture
   f. Examples where you explained or clarified the concepts for your team mates
   g. Applying the topics to your own venture, and specific examples of how you applied what you learned
   h. Things that you would do differently next time based on what you learned
   i. Other things you did that you feel provide evidence of your learning

Figure 6: Visualizing the Evolution of the Innovativeness and Feasibility of Ventures throughout the Iterative Design Process

Alex Bruton, ICSB 2010

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Summary and Concluding Thoughts

We have introduced The Venture Design Studio, a design thinking approach to teaching and learning for the conception, design, characterization, prototyping, testing, pitching and innovation of new venture concepts. Based on our experience and the data-based evidence available to date, we propose that this is a very attractive approach to entrepreneurial learning for curricula that aim to provide students with an authentic entrepreneurial experience and the opportunity to reach into and catalyze innovation within their local ecosystems. For example, the data tell us that: student response to its introduction has been overwhelmingly positive; they frequently express a desire for the approach, their preference for the delivery medium, and their feeling of gaining skills relevant to their careers and new ventures; students were able to meet or exceed all learning objectives to do with toolset, mindset and network building, and collaborative knowledge creation; students report applying the VDS approach (and content) in other courses, including their business planning course; students’ abilities to persuasively pitch their concepts were vastly improved as a result of the iterative nature of the process and the collaborative network from which they received feedback; students became versed in and aware of entrepreneurial ways of thinking and practice, threshold concepts and troublesome knowledge to a level not usually associated with classroom approaches, including business planning; local entrepreneurs and venture capitalists were engaged with and provided regular feedback on student learning and their prototypes; and learners, teachers and experienced entrepreneurs all reported (anecdotally) that the resulting new venture concepts were considerably more innovative and feasible than those resulting from other approaches with which they are familiar.

To rephrase Cooperrider (2008) a little: some of our classrooms now look more like design schools than they used to – alive with a design studio, interdisciplinary teams, and prototyping –
where student entrepreneurs act as designers who seek out disruptive, unexpected innovation opportunities. And to respond to Dunne and Martin (2006), we too see merit in thinking like designers, at least so far as teaching and learning for the conception, communication and innovation of highly innovative new venture concepts.

We look forward to our future work, the plans for which include: describing in more detail what happens when students learn in this way; understanding how exactly learning takes place in this way; and making claims based on more evidence about whether and in what ways the design thinking approach might be better suited than other teaching and learning methods for meeting similar objectives. We also look forward to applying the design thinking approach to other innovation processes in our classrooms and within our regional innovation ecosystem.

Finally, we close by acknowledging that this research is in its early stages and that much more remains to be learned. However, because student response has been so strong to their learning experience, because so many of the typically hard-to-teach learning outcomes seem to be teachable in this kind of environment, and because we have (finally!) seen a very convincing shift away from used textbooks stores and student-bars (even in this first undergraduate course), we are thrilled to be sharing what we have learned to date.

References


An Exploratory Study of Entrepreneurship Curriculum and Faculty in the U.S. and China

Donna Kelley, Babson College, USA
Xiangzhen Hu, Shanxi University, China

International Council for Small Business Conference, Cincinnati, OH
June 2010

Abstract

This paper explores entrepreneurship education in China, drawing on insights about university entrepreneurship curriculum in the U.S. We present an analysis of curriculum of 26 top entrepreneurship programs in U.S. universities, and an in-depth case study of Babson College in the U.S. We then present an overview of entrepreneurship education at the university level in China, focusing on leading university entrepreneurship programs. We conclude with some recommendations for the development of this field in China. We cite the need for experiential methods and connections to practice, and identify the shaping of attitudes and skill development as key objectives.

Introduction

Much has been written about entrepreneurship education, starting primarily in the 1980s and accelerating after the turn of the century with the increased recognition of the contribution entrepreneurship makes to the health of a national economy. Governments in several countries have declared their commitment to entrepreneurship education as a key priority, as several studies document (Kyro, 2006; Sorgman and Parkison, 2008). Entrepreneurship education levels differ markedly among countries, however, as a recent report by the Global Entrepreneurship Monitor details (Coduras et al., 2010). In China, entrepreneurship education has been well received, but is still a relatively new practice in higher institutions (Li et al., 2003).

Developed countries, on the other hand, tend to have a longer history with university entrepreneurship education. In fact, the first efforts to deliver entrepreneurship courses were attributed to Shigeru Fujuii of Kobe University in Japan in 1938 (Solomon, et al., 2002) and Myles Mace at Harvard’s Business School in 1947 (Katz, 2003). In the United States,
entrepreneurship education is relatively established, and attention has turned toward assessing existing programs, sharing best practices, identifying constraints, and providing recommendations. Katz in 2003 declared that the entrepreneurship education field has reached maturity in the U.S. and that future growth lies outside this country.

This paper explores entrepreneurship education opportunities in China, drawing on insights about university entrepreneurship curriculum in the U.S. We address the following question: “What is the state of entrepreneurship education in China and what lessons might be learned from the U.S.?” Following a review of literature on entrepreneurship education, we present findings based on an analysis of 26 top entrepreneurship programs in U.S. universities, and an in-depth case study of Babson College, the long-time leading university entrepreneurship program in higher education in the U.S. We then present an overview of entrepreneurship education at the university level in China, drawing from interviews with Chinese professors. We conclude with some recommendations for the development of this field in China.

The Nature of Entrepreneurship Education

The value of entrepreneurship education can be reflected in its impact on entrepreneurial activity. High SME failure has been attributed to a lack of training, for example (Ibrahim and Soufani, 2002). Studies on the influence of education and training on attitudes have found a positive link to interest in entrepreneurship and perception of feasibility: for example, in post-secondary education in Northern Ireland (Hegarty, 2006), and among university students in England (Souitaris et al., 2007). Cruz, et al. (2009) show that individuals who are concerned about furthering their university education in management and entrepreneurship are more innovative and less conformist. The WEF (2009) indicates that higher education addresses
opportunity-based, innovation and high growth entrepreneurship; this illustrates the potential for universities to increase employment and national competitiveness through entrepreneurship education.

The most compelling evidence of the benefits of entrepreneurship education thus far has come from the Global Entrepreneurship Monitor (GEM) survey of 38 countries in 2008 (Coduras et al., 2010). This study shows a range of impacts on entrepreneurial attitudes. With regard to entrepreneurial activity, the survey found a greater association between training and new business starts in more developed economies compared with less developed ones. In the latter, education may be less beneficial when factors such as inadequate infrastructure or government policies pose constraints. Then again, entrepreneurship education may simply not have reached the level of maturity it has in the more developed economies. As such, it would be useful to understand the particular considerations that could help advance entrepreneurship education in countries such as China.

In attempting to understand how education can influence entrepreneurial activity, researchers have called for greater depth of insights about how these programs and learning strategies lead to the formation of new ventures (Garavan and O Cinneide, 1994a). Researchers have suggested that education and training for entrepreneurship should positively impact actions by enhancing one’s skills (Honig 2004) and cognitive ability for managing the complex process of opportunity recognition and assessment (DeTienne and Chandler 2004). One way this can be done is by providing examples of the entrepreneurship process, and by using role models an individual can identify with. This can show people what is possible, and equip them with the ability to recognize, assess and shape opportunities (Fiet, 2000).
Similarly, most authors agree that experiential-based learning is more effective for developing entrepreneurial skills and attitudes, compared to more traditional methods like lectures (European Commission, 2008). A number of studies in innovation-driven countries, like Singapore (Tan and Ng, 2006), Sweden (Rasmussen and Sørheim, 2005), and the UK (Raffo et al., 2002) show that entrepreneurs learn best with a “learning by doing” approach. These experiential methods may also impact attitudes and intentions, which can boost the chance individuals will attempt entrepreneurial endeavors at some point in their lives (Souitaris et al., 2007).

Regarding content, Sexton (1997) identified the ten most desired topics for achieving and managing fast growth. These include: (1) using cash flow to make operational/financial decisions; (2) financing growth; (3) increasing the value of the business; (4) compensation for self and associates; (5) hiring, training, and motivating for growth; (6) succeeding in a rapidly changing world; (7) successful selling via helping the customer buy; (8) sales force management; (9) management succession; and (10) problems and pitfalls of growth.

Yet entrepreneurship training needs to be much broader. It needs to impact attitudes, help people recognize opportunities and think creatively, and enable them to build leadership skills and confidence. Entrepreneurship is multidisciplinary in nature, and can also cross into nonbusiness subjects. The European Commission (2008) even questions whether business schools are the most appropriate place to teach entrepreneurship, given that the most innovative and feasible ideas are likely to come from the technical and creative disciplines. This report goes on to state that the goal should be to promote creativity, innovation and self-employment.

There is not just a need for multidisciplinary approaches, but also cross-global training. The value of sharing ideas across national borders could provide benefits in the creativity and
relevance of ideas leading to innovative opportunities. In addition, many entrepreneurial endeavors will benefit from a global perspective. Additionally, technology may be necessary to increase the scale and scope of training programs; internet-based learning may therefore be effective in meeting high demand and extending a program’s geographic reach (Solomon, et al., 2002; Hegarty, 2006).

Universities may experience difficulties transitioning to an experiential, cross-disciplinary model, however. They may struggle in their attempts to shift from the lecture-centered approach common in many economies. In addition, Ph.D. programs are not providing enough faculty to meet the demand for entrepreneurship education (Katz, 2003; CE, 2008) and current faculty are locked into narrow disciplinary structures (Janssen, Eeckhout, and Gailly, 2005). Entrepreneurship as a discipline is still not widely accepted in many universities, and where it is, it tends to fall under the business umbrella. While the requirements for entrepreneurship education call into question the usefulness of traditional education practices, developing such programs will require a mindset shift from mainstream education and training routines (WEF, 2009).

**Examination of Entrepreneurship Curriculum at U.S. Universities**

We examined the curriculum of 26 U.S. colleges and universities ranked as top entrepreneurship schools in at least two of the following sources: U.S. News and World Report, Entrepreneur.com, Fortune Small Business, and Business Week. Babson College was identified as the number one entrepreneurship school in each list, and in the next section we provide a more detailed case study of the curriculum and teaching methods at this school. For the 26 schools, we obtained course listings for the spring semester 2010 from their websites. Where this information
was not available, we used a listing of courses from the website. We identified courses having entrepreneurship, venture, and small business in the title.

We recognize that many of the schools also had courses related to entrepreneurship, such as technological innovation, although we did not include these in our examination. Often, complementary courses like this were listed as requirements or electives for concentrations. In addition, other business courses were often included in concentrations as providing content in areas such as marketing, finance, and other disciplines. This highlights the interdisciplinary nature of entrepreneurship. Foundation knowledge in a range of disciplines is not only relevant, but these other courses can offer content in entrepreneurship. A product commercialization course, for example, can provide skills relevant to entrepreneurship. Moreover, courses in marketing, finance and other topic areas can include content applicable to entrepreneurial ventures. As such, complementarities should be considered in entrepreneurship curriculum design. In some schools, these complementarities may be used in place of providing a wider array of distinct entrepreneurship courses.

Separate courses were identified for practical or experiential elements. Examples of these include field projects or internships with startups, or those in which students take actual steps to develop their own business concepts. Included in the experiential offerings, of course, are offshore trips to different countries, which can involve tours of companies and discussions with local entrepreneurs and others involved in this activity, such as government officials, business associations, venture capitalists, and others. Courses are even offered with trips in-country, such as Silicon Valley, showing the value of examining entrepreneurial regions within one’s own region.
A few schools provided some basic educational components in separate courses, such as business plan writing and case studies. A number of schools provided short courses with as little as a half credit in focused topic areas, such as “managing enterprise risk” or “financing entrepreneurship in emerging markets.” This may allow faculty with specific expertise or interests to create specialized offerings, without having to build an entire 4-credit course around them. Curriculum developers should therefore address whether to offer individual specialized courses or those inclusive of a range of topics and pedagogies.

One consideration for the above may be faculty expertise and training. Especially when an entrepreneurship education program is in its earlier stages, and faculty are more accustomed to traditional methods like lectures, it may be better to have a few faculty members skilled or trained in case teaching, business plan writing or practical experiences provide this, and then disseminate these practices more broadly over time. In addition, a university should not expect faculty to adopt or embrace new pedagogies and content without providing training and allowing for the development of subject matter expertise.

The topics offered in the U.S. universities could be categorized as encompassing phases, functions, and context relating to entrepreneurship. Entrepreneurship can be represented as passing through different phases over time, each presenting their own particular challenges. Phases are often represented in life cycle diagrams. They can include: (1) opportunity evaluation or feasibility analysis, (2) starting a business, and (3) growing and managing the venture one it’s started. The second phase is represented in new venture or entrepreneurship courses, which is the core foundation course offered in nearly all of the schools examined. A few schools had multiple versions of what appear to be new venture courses. Others had seemingly different courses, but narrowed their offerings to this phase. One could question the efficiency of such an approach,
and whether this curriculum provides sufficient breadth of knowledge and training about entrepreneurship.

Entrepreneurship curriculum can also contain courses in particular functional areas, including those that may be particularly important for entrepreneurs. Finance was, by far, the most frequently listed functional course. Beyond a basic entrepreneurial finance course, more specialized courses were offered in other aspects of finance, most typically around private equity, and often more specifically on venture capital. What is interesting about this is that despite all the publicity this financing form gets in the U.S., it represents an unlikely source of financing for most new firms. This indicates the importance of understanding the financing environment for entrepreneurs, and providing a realistic and relevant education for our students.

Entrepreneurial marketing, and selling in a few cases, was offered in some schools, reflecting the merit of customer and market understanding, and the unique challenges encountered in an entrepreneurship context. Many schools also offered some core courses on creativity and innovation, which can develop basic skills in identifying and building opportunities with differentiation potential in highly uncertain, complex environments. Together, entrepreneurial market understanding and creative thinking may be key abilities that make entrepreneurship distinct: the underlying element in identifying unique and valuable business concepts.

It is also worthwhile to note the frequency of entrepreneurship law courses offered. Although entrepreneurs are likely to consult lawyers for advice on such areas as intellectual property and contracts, a basic knowledge of legal matters is likely one component contributing to the multidimensional understanding entrepreneurs possess.
While a core entrepreneurship course can be applied to various organizational forms, these different contexts may present unique considerations and challenges. Across the sample, courses were offered on entrepreneurship in family businesses, established corporations, social enterprises, technology ventures, women-led businesses, and international ventures. For several schools, there was a heavy emphasis on social offerings, which likely reflects the current attention being paid toward addressing societal well-being, economic development of poorer countries, nonprofits, social responsibility of for-profits, and environmental and sustainability concerns, among others. Several schools offered courses in alternatives ways to enter entrepreneurship, such as buying a business or franchising.

Technology-focused courses were either broad in coverage, or focused on particular technology areas, such as biotechnology or software. Likewise, international courses either encompassed the globe or examined specific regions like Asia or Latin America. These courses, as well as family, women, and corporate may be complementary to other strategic areas for the college. In other words, a school may also have strengths and concentrations in global business or they may be interested in developing more programs for women leadership. In other cases, a school may recognize the prevalence of students coming from family businesses, who are interested in entrepreneurship. Current or prospective MBA students coming from nonbusiness backgrounds or likely to seek employment in a particular region, industry, or functional specialty may indicate a particular emphasis. This illustrates the value of understanding the institutional and environmental context when planning entrepreneurship curriculum.

The range of schools studied could be classified into four approaches, with some adopting more or less of a single approach, or displaying characteristics of multiple approaches. The first approach is a basic one, covering just new ventures, or a set of core courses that are
popular across the sample, most likely: entrepreneurship, growth, business planning, and finance. The second approach is a balanced one, where courses are offered across stages, functions, and contexts. Third is a weighted focus, where an institute may concentrate more heavily in a certain area, like finance, social, or innovation. Finally, some institutions took a creative approach, with several unique offerings not widely available in other schools. The basic approach is likely a safe starting point; whereas a balanced one may represent a larger and perhaps more established program. The weighted focus could account for institutional or environmental factors. The creative approach likely requires an allowance for experimentation and access to faculty with a variety of experiences and knowledge (including adjunct practitioners).

Of the 26 U.S. colleges and universities studied, most offered courses at both the undergraduate and graduate level. One offered only undergraduate entrepreneurship courses, and three offered only graduate level courses. All but four of the colleges had entrepreneurship centers. Interestingly, the four without entrepreneurship centers tended to follow more of a basic approach with curriculum. Entrepreneurship centers played a variety of roles. They could oversee entrepreneurship research and teaching at the college, but also engage in outreach to the community. The latter involves a variety of connections between the business community and students. For example, business people could volunteer as guest speakers, advisors or mentors. They may also offer opportunities for student projects or internships. Entrepreneurship centers may also provide students with hands-on entrepreneurship experience in a supportive environment: for example, assisting students in starting their own businesses. Funding for these centers often originate through private donors, who could also be alumni of the college.
Analysis of Babson College

As the long-time number one entrepreneurship school in the U.S., Babson College has both comprehensive entrepreneurship curriculum and some unique teaching methods and programs. Babson could be considered as taking both a balanced and creative approach. Balance is offered in the stages, functions, and contexts covered. Courses feature multiple phases: starting new ventures, managing growth, and entrepreneurship in mature organizations. Finance and marketing-related courses are core offerings. Selling is another functional area covered; there is no law course, however, which was offered at many other schools. The curriculum also includes a wide variety of contexts: family business, technology businesses, social enterprise, and others.

Examples of creative offerings include one based on ethnographic methods for developing opportunity awareness, taught by an anthropologist, and another course on entrepreneurship, social media and virtual worlds. One enabler of this creative approach is the culture of the entrepreneurship division, which is a separate division at the college, and the college itself. Faculty are encouraged to propose experimental courses to their division chair and the undergraduate or graduate dean. These can run twice before going through a formal approval process to become a permanent course. Ideas for new courses come from full-time faculty as well as adjuncts with a variety of experience.

Given the array of unconventional courses offered, textbooks are not common beyond the core new ventures courses. There are simply no texts written for new and niche courses. Instructors often assign readings from academic/practitioner journals, like Harvard Business Review. Some will assign business or popular press books. The core new venture course, in addition to others offered by this division, assign as many as ten cases on average during the
semester; this demonstrates the emphasis on case teaching. Babson produces a variety of cases on entrepreneurship; many are written about Babson graduates that have started businesses.

Entrepreneurship courses are offered at both undergraduate and graduate levels at Babson, and students at both levels may concentrate in entrepreneurship. Entrepreneurship majors or concentrations are uncommon even in the U.S., and those providing this option often include some non-entrepreneurship courses in the required or elective offerings. At Babson, only entrepreneurship courses count toward an entrepreneurship concentration, although many are cross-disciplinary and may count toward other business concentrations.

Although not all students concentrate in entrepreneurship at Babson, they are all exposed to entrepreneurship during their college experience. Freshmen learn about the different business disciplines by starting and running actual businesses as part of their Foundations of Management and Entrepreneurship course during their first year. MBA students learn entrepreneurship fundamentals during their core foundation modules. Courses in other disciplines typically include some entrepreneurship components. While practical elements are available outside of class, like business plan competitions or student business incubators, there is a particular emphasis on providing experiential elements in the courses. Application of entrepreneurship concepts therefore happens both inside and outside the classroom.

Like many schools in the U.S., entrepreneurship courses employ a mix of case discussions, lectures, and guest speakers. The frequency in which a variety of exercises and student presentations are used leads the class to a high level of engagement. This style of teaching stimulates frequent student participation, which is supported by grading expectations (participation is often 30% of the total grade) and relatively small classes, with most limited to 42 students.
A level of commitment on the scale offered by Babson requires enormous faculty resources. What sets Babson apart is not only the extent they draw on adjunct practitioners to teach courses, but also the level of entrepreneurship experience revealed by their tenured faculty, in addition to their academic accomplishments in the entrepreneurship field. Faculty have started businesses, worked in entrepreneurial environments and invested in ventures, before and during their academic careers. Babson has 16 tenure-track or tenured professors in the entrepreneurship division and an additional six shared with other divisions at Babson. All of these hold Ph.D. degrees. There are as many as 39 adjunct lecturers/practitioners, who come from different business fields, most with MBAs or masters degrees. While the tenured faculty have a high practical orientation, the adjunct faculty are as unique in their ability to understand theoretical frameworks.

Like many other schools in the U.S., Babson College has an entrepreneurship center. The Arthur M. Blank Center for entrepreneurship was named after Babson graduate and donor Arthur M. Blank, the founder of Home Depot, a large home improvement and construction warehouse retailer based in the U.S. This center focuses on enhancing entrepreneurship education and practice through research and outreach into the community.

*The Current State of Entrepreneurship Education in China*

University entrepreneurship education has received significant attention by only a handful of universities in China, and only since the last decade. Awareness about entrepreneurship education is therefore emerging, yet rapidly growing. There are three main drivers for this interest. First and most importantly, the enormous growth in the university student population in China has produced a substantial number of graduates. Universities are
concerned about employment opportunities for these educated people. Entrepreneurship is a viable option, particularly as the dominance of state-owned enterprises is displaced by the encouragement of private business, and both ambitious Chinese entrepreneurs and multinational companies set examples that motivate China’s populace.

Second, this educated workforce can be employed to increase China’s comparative advantage with other nations as it moves away from being the low cost “manufacturing center of the World” toward developing new technologies and introducing innovations, particularly in knowledge-based industries. Entrepreneurship is an attractive means for stimulating individual initiative. Third, entrepreneurship is a major contributor to economic growth in China, as it has been in many nations. Entrepreneurship requires knowledge and training and as such, universities must rise to this responsibility.

The majority of Chinese universities, numbering at least a thousand, offer no entrepreneurship education at all. These schools have not currently embraced the concept of entrepreneurship education or have not yet dedicated resources to start such programs, but they could pursue this opportunity in the future. About one hundred universities offer some entrepreneurship courses. Most of these offer training through the “Know About Business Program” (KAB). Only a handful, however, can be considered advanced universities offering entrepreneurship courses taught by university faculty. Both the advanced programs and the broader-based general training that is currently offered by the KAB are needed in China. We next review the KAB program, followed by an analysis of the advanced universities.

**KAB Program**

KAB is an education program developed by the International Labor Organization (ILO). The ILO is a specialized agency of the United Nations that works with governments, employers
and workers to shape policies and programs that promote job creation and labor rights. The KAB program provides entrepreneurship education at vocational, secondary, and higher education levels. KAB was co-introduced into Chinese universities by the ILO, the Central Committee of the Communist Youth League, and the All-China Youth Federation, and the first class was offered in 2007.

The purpose of this program is to prepare college students with basic knowledge about enterprise and entrepreneurship—particularly those studying non-business subjects. It strives to open their minds to the possibility of opening their own businesses and increase the chance they will do well in this endeavor. Realistically, KAB training does not expect most students to become high-potential entrepreneurs based on KAB training. It teaches them about this option. Beyond this, it is likely that more professional entrepreneurship education will be needed.

KAB is a widespread program offered in more than 30 developing countries. The program has unified requirements and standardized content and teaching materials. In order to qualify as a KAB school, universities must send at least two instructors to a training seminar. The schools must offer the course “Student’s Basic KAB Entrepreneurship Knowledge” as a public for-credit elective course with at least 32 contact hours. The maximum enrollment in class should be 35 students.

More often than not, KAB instructors are not university faculty; they typically come from the administrative ranks. They may be advisors or counselors for students, particularly those responsible for assisting them in obtaining employment. Because KAB is aimed toward addressing the employment problem in China, these advisors usually are assigned to take the KAB instructor training to become KAB instructors. In addition, KAB does not require particular education requirements for KAB instructors; they likely have bachelor’s degrees in
various fields. In fact, many KAB schools do not have a management division, which could otherwise provide qualified business faculty.

The standardized KAB teaching content includes the following eight modules:

1. What the enterprise is
2. Why the entrepreneurship spirit is recommended
3. Who can become an entrepreneur
4. How to become an entrepreneur
5. How to find a good entrepreneurial idea
6. How to start an enterprise
7. How to operate an enterprise
8. How to prepare a business plan

These modules are exactly the same for all schools, regardless of differences in student majors, level, or other aspects. A standard KAB textbook is used. Students electing to take the course usually receive two credits. While the KAB model provides some entrepreneurship training to university students, any expectations for this program should recognize limitations such as the following:

1. With only 32 hours of class time, KAB can only provide the most basic level entrepreneurship training. Its value lies in eliminating illiteracy about business and inspiring entrepreneurs. But it should not be assumed that students will have all the knowledge they need to start a business, particularly when many students do not enter the course with prior business training.

2. As a public elective course offered to all major students, the teaching content and methods all the same. The program could benefit from adapting to different student levels and experience, and regional differences.

3. There are no specific professional requirements for instructors. They often lack academic backgrounds, and they do not have entrepreneurship experience. Some
schools invite successful business people as temporary instructors, but even these lack teaching qualifications.

The biggest issue for Chinese universities now is student employment after graduation. What the student population needs most, regardless of their field of study, is a change in the traditional Chinese ideals of discouraging risk taking. This should be the purpose of entrepreneurship educational at a general level, and could be the reason that KAB has become so popular in such a short time: with universities, students, and governments that promote the program. KAB focuses on building basic thinking about entrepreneurship for youth; however, it does not lead to deep and broad understanding about entrepreneurship.

**Advanced University Entrepreneurship Education in China**

The popularity of the KAB is a signal of the emerging interest in entrepreneurship education in China. Another indicator is the leadership of a few exceptional universities in offering more extensive curriculum in this field. These programs offer more professional and wider scope entrepreneurship courses, like Enterprise Growth Management, Entrepreneurial Leadership, The Entrepreneurship Financing Decision and so on. These universities have qualified professional faculty with academic research backgrounds and achievements in the entrepreneurship field. They can offer entrepreneurship courses containing both theory and practice, and students in these universities can be developed into entrepreneurship professionals. Most of these are also KAB schools.

While some universities in China may offer an occasional entrepreneurship course, perhaps due to the interest of an individual faculty member, there are not many more than ten universities that can be considered advanced: in other words, making a high-level commitment to entrepreneurship education. Examples of schools in this advanced category are: Qinghua
University, Zhejiang University, Nankai University, Shanghai Jiaotong University, Sun Yat-sen University, Central University of Finance and Economics and Jiangxi Normal University. We collected information on these schools through a review of their websites and interviews with faculty.

These advanced universities have two common characteristics. First, they all have sophisticated business management programs, which can be considered a foundation for entrepreneurship education. Their business expertise developed rapidly over past few decades, providing a solid base from which they could offer many professional entrepreneurship courses. Second, they all have close relationships with foreign advanced entrepreneurship research and education organizations, which provided a basis for learning from more established institutes. For example, Qinghua University has partnered with University of California at Berkeley in the U.S. and Zhejiang University has partnered with Babson College in the U.S. and EM Lyon Business School in France.

The motivation for university entrepreneurship programs comes from three sides: universities, government and student demand. Basically, students are concerned about their employment prospects, governments focus on employment and economic development, and universities are interested in employment and new academic research fields. Additionally, for a university, higher student employment rates boost the stature of the university and attract more students.

In China, 99% of universities are financially supported by the government. Besides the general funds universities receive, money is also available from different government agencies like scientific bureaus, education bureaus, and development and reform commissions. All provinces in China have funds to support research each year, with universities receiving most of
these funds. Entrepreneurship education is one area that can receive support, and universities may receive specific funds for these programs if it is a special focus of the provincial government.

Entrepreneurship courses at the eight universities are generally taken as elective courses, and are offered at undergraduate, graduate, and doctoral levels, although MBA programs are where they are mostly found. Only a few offer majors or concentrations in entrepreneurship, although students may also have an entrepreneurship component in their thesis work. Although entrepreneurship courses are typically offered as electives, they are often restricted to business and management majors. Students outside the business disciplines can take entrepreneurship through the KAB program.

In many of the universities, entrepreneurship overlaps with innovation topics. Finance-related topics are also popular. Qinghua, Zhejiang, and Sun Yat-sen have some of the more diverse offerings, with courses on entrepreneurial leadership, growth, strategy, and business plan courses, among others. The nature of the course offerings can often reflect the strengths of the faculty or university.

Many faculty in these universities have academic research achievements in entrepreneurship field. Most of the entrepreneurship faculty come from business disciplines, such as human resource management, technology innovation, organization behavior, finance, accounting, marketing, information management, project management, strategy and others. Some have had doctoral dissertations focused on an entrepreneurship topic. Full-time faculty rarely have entrepreneurship experience, however. But they will often ask guest speakers to visit class, which provides a practical element. In addition a few of the schools have adjuncts with work experience teaching or co-teaching some courses, particularly at the MBA level. The universities
often recruit business people or visiting faculty from overseas to give one-two hour guest lectures; this is often done outside of regular classes, and is sometimes arranged as part of a seminar series.

In each university, there is typically a group of four or five professors both teaching and researching in the entrepreneurship field. One or two will have a heavier emphasis on publishing. Publishing is often heavily weighted toward writing textbooks or translating foreign textbooks. But some faculty have published articles in international journals, and this is increasing. Among the eight universities, Qinghua, Zhejiang University and Nankai University have larger groups of entrepreneurship faculty than the others, with ten or more professors teaching this topic.

According to our interviews, only Qinghua, Zhejiang, and Sun Yat-sen Universities offer some entrepreneurship classes in English. At Qinghua, the English language classes are taught primarily by part-time adjuncts. At Zhejiang University, half of the entrepreneurship courses are taught by Chinese teachers in English, and the other half are taught by foreign teachers. At Sun Yat-sen, the entrepreneurship classes for the international MBAs are taught in English. Some universities have professors from other countries, either living in China or there as visiting faculty. They tend to teach in other, more established business disciplines, however. Because entrepreneurship is not yet a strong field in China, universities are not likely to allocate the resources needed to afford foreign professors.

Entrepreneurship courses consist mainly of lectures and cases. Cases are often used to illustrate principles taught in the lecture. Professors usually use cases about Chinese companies, which are more relevant for the Chinese situation; these tend to come in case books. Cases from international sources like Harvard Business School are not commonly used at this point. Students sometimes participate in group activities and may be expected to give some group presentations
during the semester: for example, pitching a business idea. Participation in entrepreneurship classes is higher than in others. The level of participation, however, is still much lower than at Babson College. Babson provided one of the earliest entrepreneurship faculty training programs in China in 2006; this teaching model has influenced Chinese entrepreneurship teaching methods in some schools.

Courses like those focused on business plans may have a more practice-based element. There are some entrepreneurship “lab” facilities, but this requires resources, which may fall on the students themselves to invest funds in starting their small business during their studies. As mentioned previously, entrepreneurship centers may be where the experiential element is provided.

Most entrepreneurship centers are based in the business management academic divisions. They rarely are independent; they are just “two labels, but the same people.” The resource requirements are a key reason for this. However, these centers are valuable in providing a base from which to organize and support all the entrepreneurship initiatives at the university. Some of the centers take part in international entrepreneurship research projects; this keeps them up to pace with other parts of the world. Some have more connection to the outside: for example, creating training programs for managers. The centers can also focus on providing experiential elements for students, such as helping them to start businesses.

Discussion and Conclusions

Through dynamic entrepreneurship, China can transition its economy toward innovative and knowledge-based enterprise. University entrepreneurship education is in its early stages of development in China, but presents great opportunity for creating high potential businesses and
employment options for graduates. While lessons from countries with mature programs may be useful, however, it is important to consider Chinese culture and the particular environmental conditions that impact entrepreneurial activity more specifically in this country. The experience of the leading Chinese universities reviewed in this paper should therefore be integrated with the lessons learned in countries like the U.S.

Entrepreneurship education should have two main objectives: to foster positive attitudes about entrepreneurship and develop skills for starting businesses. China’s younger generations have grown up in different times. They share ideas within and outside China through advanced communication technologies and broad travels. They have developed new perspectives, yet respect China’s traditions and historical achievements. Universities can expand their students’ already broad outlook and build their individual initiative for venturing into more highly uncertain but potentially more rewarding career pursuits. This will require positive attitudes about entrepreneurship and a willingness to take risk.

At the same time, entrepreneurs do not operate in isolation. Rather, they depend on the support of an ecosystem of players and favorable environmental conditions. Universities will need to work with policy makers to help them understand the elements that can promote entrepreneurial activity in China. Tsinghua’s leadership of the Global Entrepreneurship Monitor research project in China is one way of informing policy makers about entrepreneurial attitudes, activity and relevant framework conditions.

Additionally, entrepreneurs in China need family members that support their ambitions. They need employees, suppliers and distributors to work with them and customers willing to try their products and services. And while policy makers and businesses may open up access to capital, seed capital often comes from informal sources. Entrepreneurs may therefore rely on
family, friends and acquaintances willing to financially back their ideas. In short, attitudes about entrepreneurship extend beyond the entrepreneurs to their stakeholders and the ecosystem in which they participate.

Educators designing entrepreneurship programs in China need to consider how to use experiential methods, which have shown to be effective in the U.S. and elsewhere. These methods can be acquired and adapted for the Chinese situation through entrepreneurship educator training, or by learning from visiting faculty with experience teaching entrepreneurship. In addition, the experiential component often happens outside or peripheral to the classroom, through such activities as business plan competitions, student incubators, and campus-wide guest speakers. Educators also need to make a connection to practice. Co-teaching with adjunct business people or inviting guest speakers to class have been used by the advanced universities to help students understand how principles translate to practice.

The transition from traditional faculty and structures will be a challenge for many universities. Even in some U.S. universities, conventional faculty do not see entrepreneurship as a “real” discipline. Administrators will need to allow for experimentation with new courses and support the development of entrepreneurship programs. Where resources are limited, it may be best to train a few (more adventurous) faculty members and follow a basic model, first offering a new ventures course, then adding other core courses like managing growth and finance as the programs develop.

Faculty may be able to adapt disciplines like marketing or finance to the entrepreneurship context, with careful research and understanding about how this can be done. Similarly, it is apparent that some Chinese universities leverage strengths they already have in areas like finance, engineering, or human resources: for example, by offering courses relating to these disciplines.
These types of courses can help both faculty and students stretch their knowledge into a new context.

Although most of the entrepreneurship courses in the advanced universities were offered at an MBA level, it might be useful to introduce this topic into the undergraduate curriculum as well, to inspire college students early in their studies. At the same time, development of this field will require Ph.D.s with an entrepreneurship focus, indicating the need for doctoral programs in this field in China.

This study offers an exploratory look at entrepreneurship programs in China, and how lessons from the U.S. might be applied toward further development of this field. A follow on study is planned to gain a range of insights from faculty, administrators, and students of the leading Chinese universities. We hope to gain a greater depth of understanding about how entrepreneurship is taught and the particular considerations that are relevant for building programs in this specific context. In so doing, we hope this research will contribute toward the development of entrepreneurship education at the higher education level in this exciting culture.

References


Entrepreneurship is broadly viewed as a major contributor to the economic growth of nations. When economic growth stalls we can assume there are more challenges, yet perhaps more opportunities, for entrepreneurship. A major goal of this session will be to extend knowledge about entrepreneurship in diverse and dynamic world environments. This session will explore the frequency and nature of entrepreneurship during the 2008-9 global recession. It will start with background on changes in global entrepreneurial activity and aspirations, followed by a discussion of the nature and impact of several Entrepreneurial Framework Conditions during the economic recession. Audience participation will ensue.
Leadership and Culture matters: Empirical Investigation for the Mediating Mechanism of Entrepreneurial Orientation

Jae Hyeung Kang, Sang Chul Park, and Ayman Tarabishy 1

ABSTRACT

Using survey data collected from the three entrepreneur firms located in South Korea, we empirically investigate the unique East Asian cultural value and leadership mechanisms explaining how East Asian entrepreneurial organizations achieved remarkable firm performance. In order to do so, we examine the influence of both long-term orientation based on Confucianism and employees’ perceived transformational leadership on organizational performance. We further examine entrepreneur orientation as an important mediator of these relationships. Our arguments have practical and theoretical implications for understanding how leadership, national culture, and organizational culture make important contribution on organizational performance.

Keywords:

Entrepreneurial Orientation, Leadership, National Culture

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INTRODUCTION

Western researchers admit that the East Asian countries such as China, Taiwan, and Korea achieved remarkable economic growth over the past decades (Franke, Hofstede, and Bond 1991). Although the financial crisis in 2008 threatened economic stabilities in those countries, East Asian countries showed fast recovering capability and several Asian entrepreneur organizations entertained unbelievable financial growth after the crisis. It seems that East Asian countries have a unique national value to overcome tremendous crises. Researchers attempted to explain the factors that made these impossible missions possible (Franke et al. 1991; Hofstede 1991; Karn 1979), but they have suggested somewhat broad explanations so far. Given this theoretical limitation, we clearly explain this growth mechanism among East Asian countries from leadership and national culture perspective. More importantly, we suggest entrepreneurial culture as an important mediation construct that can explain how East Asian countries and entrepreneur organizations made significant economic success overcoming various risk and obstacles.

An organization’s entrepreneurial orientation (EO) is a specific aspect of organizational culture that has extensive quantitative empirical research behind it. EO can be defined as the organizational culture that is represented through their risk taking, proactivity and innovation (Miller 1983). Miller (1983) emphasized that all entrepreneurial organizations must innovate, take proactive action, and take risks. Specifically, Miller (1983) argued that, in general, theorists would not call a firm entrepreneurial if it changed its technology or product line (‘innovative’ according to our terminology) simply by directly imitating competitors while refusing to take any risks. While changing
companies’ business process, a firm must to take proactive approach as well. By the same token, risk-taking firms, which are highly leveraged financially, are not necessarily entrepreneurial. They must also engage in product-market or technological innovation. Thus, Miller (1983) reserved the label of “entrepreneurial” for firms which are concurrently risk taking, innovative, and proactive.

Although still in its infancy, this stream of research has highlighted some important factors, including contextual factors, and characteristics of the EO itself (Covin and Slevin 1991; Dickson and Weaver 1997; Dirk and Imanol 2007; Lumpkin and Dess 1996). We also note that researchers have endeavored to identify the theoretical and empirical relationship between national culture, entrepreneurship, and organizational performance (Ardichvili and Gasparishvili 2003; Kreiser, Marino, and Weaver 2002; Lee and Peterson 2000; Marino, Strandholm, Steensma, and Weaver 2002; Swierczek and Ha 2003). Despite this progress, the question of how East Asian’s long-term orientation culture and transformational leadership influence organizational performance has yet to be explored. In addition, the strategic mediation effect of EO on those relationships was not well articulated. Given these theoretical and empirical gaps, we believe that it should be valuable to investigate the empirical relationships between leadership, national culture, EO, and organizational performance. In this study, we will examine the key antecedents and consequence of EO. In so doing, we make three important contributions to the leadership, culture, and entrepreneurship literature.

First, we examine the mediation mechanism of EO on the positive relationship between transformational leadership and organizational performance. In this study, transformational leadership refers to “a longer term relationship established between a
leader and followers, built up over many interactions and having a more organizational or strategic orientation” (Herold, Fedor, Caldwell, and Yi 2008, p. 348). This leadership style is one of the most frequently applied constructs in business literature (Bass 1985; Bono and Ilies 2006; Burns 1978; Richer and Vallerand 1995; Rubin, Munz, and Bommer 2005). In addition, several researchers investigated various constructs such as self-efficacy belief (Kirkpatrick and Locke 1996), intrinsic motivation (Charbonneau, Barling, and Kelloway 2001), and organizational citizenship behavior (Boerner, Eisenbeiss, and Criesser 2007) mediating the relationship between transformational leadership and performance. Given these previous contributions, the importance of transformational leadership can not be neglected in entrepreneurship study as well. However, there are limited literatures investigating the relationship between leadership styles and entrepreneurship (for an exception, see García-Morales, Llorens-Montes, and Verdú-Jover 2006; Todorovic and Schlosser 2007). In this study, we examine how EO plays an important mediating role between transformation leadership and organizational performance. We expect the EO will provide strategic links between transformational leadership and organizational performance. Given this strategic importance of EO, we will contribute to entrepreneurship literatures by clearly identifying the theoretical relationship.

Second, we propose the mediation mechanism of EO on the positive relationship between national culture and organizational performance. Kreiser et al. (2002) point out that only one study (Knight 1997) has examined the psychometric characteristics of the Covin and Slevin’s (1989) EO construct in a cross-cultural setting. Applying Hofstede’s (1984; 1991) cultural dimension of long-term orientation, we explain unique East Asian
cultural value of Confucianism and its direct and indirect influence on EO and organizational performance in workplaces. Although Hofstede (1991) attempted to address the relationship between long-term orientation and entrepreneurship, there is no existing research that clearly demonstrates the relationship between long-term orientation, EO, and organizational performance. Since EO consists of sub-elements such as risk taking, pro-activity and innovation (Miller 1983) and Confucianism value contains critical entrepreneurial elements, we will be able to find the direct and indirect links between long-term orientation, EO, and organizational performance.

In summary, we build a theoretical model to examine how organizational performance is influenced by employees’ perceived transformational leadership and their long-term orientation culture. In addition, we explain the important mediation mechanism of EO between these relationships. The theoretical model is shown in Figure 1 and discussed below.

STUDY HYPOTHESES

Transformational Leadership and Organizational Performance

The debate over the nature of the leadership and performance relationship has not yet been resolved. Many researchers ascribe organizational performance to factors other than leadership, typically macro variables at the organizational or environmental level. For example, Meindl, Ehrlich, and Dukerich (1985) criticized that the attribution of performance results to the actions of leaders is most often the consequence of romantic fantasy rather than a solid description of a causal relationship. However, a review of
leadership in organizations, with a focus on the leadership-performance relationship, counters the above arguments (Kaiser, Hogan, and Craig 2008; Victor, Francisco, and Antonio 2008). For example, Kaiser et al. (2008) clarified the construct of the leadership and performance relationship, pointing out the much prior research has centered on the emergence and approval (by followers as well as supervisors) of leaders rather than on the effects that leaders may have on organizational performance outcome. In addition, there exist specific research studies that demonstrate that leaders can be the cause of organizational performance (Smith, Carson, and Alexander 1984) as well as well-designed meta-analyses (DeGroot, Kiter, and Cross 2000; Judge and Piccolo 2004) that support this conclusion. Moreover, prominent leadership scholars such as Bass (1985) and Yukl (2005) generally agree that leadership is positively associated with organizational performance.

In this study, we specifically argue that transformational leadership provides positive influence on organizational performance. Transformational leadership is based on the notion that leaders inspire and motivate individuals to perform at exceptional levels (Bass 1985). In this notion, transformational leaders themselves do not solely play a significant role on increasing organizational performance. More importantly, employees who perceived their supervisors’ transformational leadership are inspired to perform well in the organization. Given this, most leadership theories support that the leaders affect performance most strongly by their direct effects on followers (Bass 1985; Conger and Kanungo 1998; Kaiser et al. 2008; Kouzes and Posner 1987).

The next question is how perceived transformational leadership contributes to organizational performance. A central thesis of Bass's (1985) theory is that
“transformational leadership goes beyond exchanging inducements for desired performance by developing, intellectually stimulating, and inspiring followers to transcend their own self-interests for a higher collective purpose, mission, or vision” (Howell and Avolio 1993, p. 891). According to an empirical study by Howell and Avolio (1993), transformational leadership based on intellectual stimulation and individualized consideration generates advantages for organizational performance. From these studies, we note that leaders use transformational leadership as a strategic method to increase organizational performance. In recent transformational leadership study, Victor et al. (2008) noted that transformational leaders use knowledge and innovation to increase organizational performance. In addition, both Bass (1985) and Howell and Avolio (1993) clearly identified that followers under the influence of transformational leadership are inspired and motivated to work beyond their job related expectations, and these collective motivations and behaviors create more opportunities to increase organizational performance. As a result, the critical driver for organizational performance is inspired and motivated followers. In summary, transformational leaders can inspire and motivate their followers collectively maximize performance (Howell and Avolio 1993), and this process eventually improve organizational performance.

H1: Perceived transformational leadership provides positive motivational impacts on followers to improve organizational performance.

Long-term Orientation and Organizational Performance

Researchers have identified certain characteristics of national culture and attempted to find some common characteristics based on various definitions about culture (Hofstede 1984; Schein 1992; Triandis 1989). Hofstede (1984) defined culture as “the
collective programming of the mind which distinguishes the members of one category of people from those of another” (p. 389). The members of a group interacting for a certain period of time share assumptions, values, and artifacts, which in turn induce culture (Schein 1992). Culture, then, defines structures and systems, guides management processes, impacts work-unit climate, and, ultimately, affects organizational performance.

Researchers studying national culture have developed various frameworks to understand cultural differences and have added important contributions to the cross-culture literature (Hofstede 1984; Triandis 1989). For example, Hofstede (1984) introduced several cultural dimensions, such as power distance, collectivism, masculinity, long-term orientation, and uncertainty avoidance. These frameworks have been frequently applied and explored by other researchers in the behavioral and cultural literature (Earley 1993; Gelfand et al. 2006; Lee and Peterson 2000; Marino et al. 2002; Swierczek and Ha 2003; Wheeler 2002). Among various cultural dimensions suggested by Hofstede (1984; 1991), long-term orientation is defined as “the degree to which people’s actions are driven by long-term goals and results, rather than the short-term need for immediate gratification” (Ardichvili and Gasparishvili 2003, p. 32). This dimension is also called “Confucian dynamism”, which refers to the long-term versus short-term orientations in life that appear to differentiate Westerners from Easterners. For example, East Asian countries such as China, Korea, and Hong Kong ranked the highest in the long-term orientation index while Western countries such as the United States and Canada were ranked relatively low (Hofstede 1991). This cultural dimension has been dominant traditional value in East Asian societies and still provides significant influence to East Asian employees.
Karn (1979) and Hofstede (1991) noted that the economic success of the Eastern during 1960’s and 1970’s could be attributed to common traditional cultural values and this has generated a competitive advantage for successful business activity. Based on this notion, we argue that long-term orientation based on Confucianism positively influence on organizational performance. For example, Franke et al. (1991), in a study of economic growth in 20 countries over a 20 year period, found that high levels of long-term orientation were associated with fast economic growth in Asian countries. Franke et al. (1991) also suggested that Confucian dynamism is associated with national economic growth rates. This Confucian dynamism emphasizes the dynamic rather than the static values traditionally found in Confucianism (Franke et al. 1991). This historical data show a positive relationship between long-term orientation and national economic growth. In addition, Wang, Farh, and Luo (1999) argued that emphasis on HR practices of long-term orientation will positive influence firm performance. Since national economic growth is an aggregated outcome of each organizational performance within a country, we can anticipate that this cultural value is also positively associated with organizational performance.

In the long-term orientation dimension, there are important sub-elements that provide positive impacts to increase organizational performance. First, people in the long-term orientation culture are willing to subordinate themselves for an organizational purpose (Hofstede 1991). This collective oriented mindset requires a value that individuals sacrifice themselves for collective goals even in difficult situation and moment, and leads employees to attach to the organization as a form of long-term commitment. Second, people in long-term orientation culture respect for social and status
within limits (Hofstede 1991). This cultural value leads employees to admit limited resources within current organization and to work hard in order to overcome this limitation. Third, long-term orientation emphasizes thrift, being sparing with resources (Hofstede 1991). As a result, employees within long-term orientation culture traditionally regard thrift behavior as desirable to organizational success, and this collective attitude generates more opportunity to increase organizational performance.

$H2$: Long-term Orientation perception based on Confucianism provides positive impacts to create more opportunities to increase organizational performance.

The Mediating Mechanism of Entrepreneurial Orientation

We expect that employees’ perceptions of EO will be an important mechanism through which the predictors in the theoretical model (employees’ perceived transformational leadership and long-term orientation) influence organizational performance. We discuss these mediation propositions below by first considering the relationships between the two predictors and EO, and then the relationships between EO and organizational performance.

**Transformational Leadership and Entrepreneurial Orientation.** Entrepreneurial organizations generally have small number of employees compare to matured organizations. In this organizational context, leaders seem to be able to create organizational culture more prominently than large and matured organization (Schein 1992). Moreover, success of small business clearly depends upon leaders’ innovative business idea and their strong desires to implement business (Yukl 2005). Leaders not only choose the basic mission and the environmental context where the employees will work, but they also choose their employees who will implement the leaders’ business
idea (Schein 1992). Therefore, leaders of entrepreneurial organization position themselves as an influential source of shaping organizational culture.

Transformational leaders appeal to their followers by getting them to accept a higher vision and exert themselves to accomplish that vision (Burns 1978). In a entrepreneur context, transformational leadership behaviors include articulating and presenting a clear vision for the new business opportunity, showing passion and enthusiasm for implementing the business idea, inspiring employees to align with the organizational goal by helping them understand the reasons for pursuing its business and the opportunities that the new business idea can generate, challenging employees to reexamine their assumptions and question old ways of doing things, and being sensitive to the needs and concerns of employees (Bass 1985).

From the leadership perspective, there are recent papers that explain the relation of transformational leadership with entrepreneurship (García-Morales et al. 2006) and innovation (García-Morales, Matías-Reche, and Hurtado-Torres 2008). I further argue about how the sub components of transformational leadership positively influence employees shaping high level of entrepreneurial culture (EO). There are several reasons why transformational leadership behaviors are likely to influence EO. First, transformational leaders have been shown to inspire and intellectually stimulate others to act in innovative ways (Burns 1978; Richer and Vallerand 1995; Yukl 2005), which will predispose their employees to be generally more receptive to innovative culture suggested by the leaders. Gumusluoglu and Ilsev (2009) found that transformational leadership positively related to organizational innovation that was measured with a market oriented criterion developed for developing countries and newly developing
industries. Their finding suggests that there is a strategic link between transformational leadership and innovative culture within EO. In addition, Victor et al. (2008) suggested that transformational leadership, in general, positively affects innovative behavior. Thus, transformational leadership would create innovative organizational culture. Second, transformational leaders generate enthusiasm on the part of employees and confidence that they can successfully implement immature business ideas and potential business opportunities (Bass, 1985). This is also likely to lead to employees having a more positive perception of the leader’s proactive attitude, because the entrepreneurial organization transforms its previous identity toward leader’s value, and thus employees within the organization will be able to fully identify their value with their leader’s one. This “organizational identity transformation” will lead organizations to shape proactive business culture within entrepreneur firms. Third, transformational leadership has been shown to relieve anxiety and induce positive emotions in followers (Bono & Ilies, 2006; Rubin et al., 2005). This will also influence the extent to which employees become more tolerant toward the potential risks and thus shape the positive emotion to take any internal and external risk against their job. If leaders do not successfully create the organizational culture, entrepreneurial organizations are exposed to risky environment and can not survive in a long run (Schein, 1992). As a result, leaders of small business have strong responsibilities to risk taking and continue to make their business profitable. This risk taking attitude of leaders should be successfully embedded in organizational culture where their followers are also willing to take risks. In summary, transformational leadership will positively influence to shaping innovative, proactive, risk-taking organizational culture.
**Long-term Orientation and Entrepreneurial Orientation.** We argue that employees’ long-term orientation perception based on Confucianism is positively related to employees’ EO perception. Some of the successive studies with Hofstede’s (1991) framework tried to link the long-term orientation with entrepreneurial behavior. Although Hofstede (1991) did not specifically discuss about EO, his theoretical perspective on entrepreneurship suggested implicit insights for understanding national culture influence on EO. For example, countries with long-term oriented cultures (e.g., China, Taiwan, and Korea) seem to be generating more individuals with high entrepreneurial behaviors (Hofstede 1991; Ardichvili and Gasparishvili 2003). According to Hofstede (1991), the values at the long-term orientation are very Confucian oriented and supportive to entrepreneurial activities. From the East Asian perspective, Confucianism value provides subtle but significant influence on East Asian people’s work and life. Given this unique cultural value of long-term orientation, we propose a strategic linkage between long-term orientation and EO.

One of key principles of Confucian teaching is the virtue with regard to one’s tasks in life consists of trying to acquire new skills, focusing highly on education, and working hard (Hofstede 1991). For example, Korean and Chinese people heavily value on developing their educational background and acquiring new knowledge and skills. Moreover, East Asian entrepreneurs tend to generate creative and innovative idea based on their previously acquired knowledge and skills (Einhorn 2007). In addition, Lin (2009) empirically suggested that long-term orientation is positively related to innovation among major automakers in 14 countries. These proactive and innovative approaches emphasize the dynamic rather than the static values traditionally found in Confucianism (Franke et
al. 1991). As a result, dynamic and future-oriented natures of Confucian value are relevant to enhance innovative and proactive culture among East Asian entrepreneurs (Allred and Swan 2004; Lin 2009; Nakata and Sivakumar 1996). Second, being patient and pursuing of whatever goals are essential assets as an entrepreneur (Hofstede 1991). Since Asian entrepreneurs keep the core value of persistence tenacity, they are willing to take any internal and external risk and develop their creative business idea into real service and product. These Confusion values will make entrepreneurs take any potential risk. Given this, entrepreneur firms based on long-term orientation tend to take innovative, proactive, and risk taking approaches in order to survive in severe competition. Therefore, employees’ long-term orientation perception based on Confucianism positively influences to their EO perception.

**Entrepreneurial Orientation and Organizational Performance.** According to Schein (1992), organizational cultures are basically shaped from three sources; “(1) the beliefs, values, and assumptions of founders of organizations; (2) the learning experiences of group members as their organization evolves; and (3) new beliefs, values, and assumptions brought in by new members and leaders” (p. 211). Schein (1992) points out that organizational performance effects are more likely to occur as a result of cultural values and beliefs that are accepted by organization members and that therefore guide their actions.

Previous research has demonstrated a significant relationship between EO and organizational performance (Covin and Slevin 1989; Covin and Slevin 1991; Naman and Slevin 1993; Rauch, Wiklund, Lumpkin, and Frese 2009; Zahra and Covin 1995). There are several conceptual and empirical literatures in favor of a linkage between EO and
both individual and organizational performance (Block and MacMillan 1993; Covin and Covin 1990; Covin and Slevin 1991; Pearce, Kramer, and Robin 1997; Wiklund 1999). The association between EO and high performance has led many firms to consider EO an important factor for success (Chadwick 1999; Rauch et al. 2009). In this study, we mainly focus on employees’ believes on their future organizational performance (Swierczek and Ha, 2003). Since there are various factors that directly and indirectly influence organizational performance and various measurement approaches on firm performance (e.g., revenue, net profit, and return of investment), it seems to be controversial to argue that EO is the most important and direct factor for improving organizational performance in general. However, the relationship between EO and employees’ believes on future organizational performance can be investigated with fairly objective approach. Given this, Swierczek and Ha (2003) designed measurement items that investigate employees’ perceived level of importance on their organizational performance. Covin (1991) also suggested that non-financial data can be used in entrepreneurship study to investigate the employees’ and managers’ perceptions towards the organizational performance because there is a strong correlation between financial and non-financial data.

In summary, our arguments in this section suggest that in addition to the direct effects of transformational leadership and long-term orientation on organizational performance, discussed in earlier sections, these factors will also influence organizational performance through their impact on EO. In other words, EO will partially mediate the positive relationship between transformational leadership and organizational performance, and partially mediate the long-term orientation and organizational performance.
H3: Employees’ entrepreneurial orientation perception partially mediates the positive relationships between transformational leadership and organizational performance; such that transformational leadership is positively related to employees’ entrepreneurial orientation, which in turn is positively related organizational performance.

H4: Employees’ entrepreneurial orientation perception partially mediates the positive relationships between long-term orientation perception based on Confucianism and organizational performance; such that long-term orientation perception based on Confucianism is positively related to employees’ entrepreneurial orientation, which in turn is positively related organizational performance.

METHODS

This empirical study was conducted at three entrepreneur companies that currently operate in Korea. In order to maintain the external validity, we controlled employees’ demographic characteristics and chose functionally similar companies. We invited employees in entrepreneur companies to participate in the study. Employees from all entrepreneur companies that were potentially impacted by the national culture participated in the study.

Research Design

The study utilized a non-experimental (naturally occurring) research design and individual level of analysis. Employees reported on their perceived transformational leadership and long-term orientation. In addition, employees reported on their perceptions of EO and organizational performance. In order to reach participants more easily, we collected the survey data through the web-based survey in which each participant was
assigned a unique ID number that safeguarded the individual’s confidentiality of their responses. Employees’ perceptions data formed the analysis in the study.

**Participants**

We sent out invitation e-mails to 480 employees which resulted in 178 employees (37.1% return rate) included in the study. We also collected data on gender (89.4% male), age (mean = 36.5), highest education level (65.7% with a Bachelors degree or higher), organizational tenure (75.0% less than 5 years, 21.6% between 6 and 15 years, 3.4% greater than 15 years), and tenure in current position (61.9% less than 2 years, 38.1% greater than 2 years).

**Measures**

**Long-term Orientation.** Bearden, Money, and Nevins’s (2006) 8-item scale was used to assess long-term orientation. Participants rated their long-term orientation perception on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items for long-term orientation include “Respect for tradition is important to me,” “I don’t mind giving up today’s fun for success in the future,” “I plan for the long term,” and “Traditional values are important to me” (alpha = 0.83).

**Transformational Leadership.** Transformational leadership was assessed using 12 items from Podsakoff, MacKenzie and Fetter (1990), whereby participants rated the leadership that their supervisors displayed within entrepreneur companies. These items represent four sub-dimensions of transformational leadership: charisma/vision, inspiration, intellectual stimulation and individual consideration. Sample items for each of these dimensions respectively are: “My boss has a clear understanding of where we are going”, “My boss inspires others with his/her plans for the future,” “My boss challenges
me to think about old problems in new ways,” and “My boss has ideas that have challenged me to reexamine some of basic assumptions about my work,” (alpha=0.92).

**Entrepreneurial Orientation.** Covin and Slevin’s (1989) 9-item scale was used to assess Entrepreneurial Orientation (EO). For each item the two end-points are briefly defined. Participants selected the number, from 1 (at one end) through 9 (at the other end) that best describes these business practices. Sample items for EO include “In dealing with its competitors, my firm typically initiates actions to which competitors then respond,” “When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, independent posture in order to maximize the probability of exploiting potential opportunities”, and “In dealing with its competitors, my firm typically initiates actions to which competitors then respond” (alpha = 0.90).

**Organizational performance.** Swierczek and Ha’s (2003) 7-item scale was used to assess organizational performance. Participants rated the level of importance that they attach to the factors as enterprise objectives, from 1 (not important at all) through 5 (very important). Sample items for organizational performance include “High revenue,” “Innovative leadership”, “Business stability,” and “Contribution to the community development” (alpha = 0.86).

**Control Variable.** Since some respondents in the study were both managers and employees reporting to their leader, we controlled for status (manager or employee). In addition, we controlled for educational background, because employees who have a higher educational background may perceive and response to the national and organizational culture differently to those who have a lower educational background. Controlling these variables, we were able to capture robust empirical relationships.
Analytic Approach

It is not easy to objectively capture and measure the aspect of culture in a context of country because there is an inherent heterogeneity within a country’s culture. It seems to be irrelevant to apply the homogeneous cultural characteristics on the entire country, because cultures can be significantly different from each other even within a single country. As a result, Hofstede's work (1980) has been criticized for many of its conceptual and methodological issues due to the inherent heterogeneity within cultures (Parboteeah et al. 2005). In order to solve these issues, we needed to assess these cultural variables at the individual perceptions for capturing relevant data from the sample. Fortunately, there is several literature measured national culture at individual level (Earley 1993; Kirkman, Chen, Farh, Chen, and Lowe 2009; Wheeler 2002). Therefore, we also investigate national culture characteristics from individual perceptions.

RESULTS

Table 1 shows the descriptive statistics and bivariate correlations for all study variables. Hypothesis 1 predicted that transformational leadership would be positively related to organizational performance. As shown in Table 2, transformational leadership was directly and positively related to organizational performance ($\beta = .17, p < .05$). Hence, Hypothesis 1 was supported. Hypothesis 2 predicted that long-term orientation would be positively related to organizational performance. As shown in Table 2, long-term orientation was directly and positively related to organizational performance ($\beta = .32, p < .001$). Hence, Hypothesis 2 was supported.

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In order to analyze mediation effects of EO, we applied Baron and Kenny’s (1986) causal steps methods. Hypothesis 3 predicted that entrepreneurial orientation would partially mediate the relationship between transformational leadership and organizational performance. Specifically, we expected that transformational leadership would be positively related to entrepreneurial orientation, which in turn would be positively related to organizational performance. To test this hypothesis we first tested the relationship between transformational leadership and entrepreneurial orientation. The results of this analysis are shown in Table 3. As predicted, transformational leadership was positively related to entrepreneurial orientation ($\beta = 24, p < .01$). Next, we tested the relationship between entrepreneurial orientation and the organizational performance. However, entrepreneurial orientation was not positively related to organizational performance ($\beta = -.01, p > .05$). Thus, the effect of transformational leadership on organizational performance is somewhat mediated through entrepreneurial orientation. This analysis partially supports for Hypothesis 3.

Next, we tested the mediating effect of entrepreneurial orientation on long-term orientation and organizational performance. Specifically, we expected that long-term orientation would be positively related to entrepreneurial orientation, which in turn would be positively related to organizational performance. To test this hypothesis we first tested the relationship between long-term orientation and entrepreneurial orientation. The results of this analysis are shown in Table 3. Unfortunately, long-term orientation was not positively related to entrepreneurial orientation ($\beta = .10, p > .05$). Thus, we were not able to conclude that the effect of long-term orientation on organizational performance is
mediated through entrepreneurial orientation. This analysis does not support for Hypothesis 4.

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DISCUSSION

The purpose of this paper was to identify important leadership and cultural antecedents to employee perceptions of EO, to find the impact of such perceptions on employees’ believes on the future organizational performance. We proposed that perceived EO mediates the relationship between employees’ perceived transformational leadership and organizational performance, and between employees’ perceived long-term orientation and organizational performance. Therefore, our research on leadership and cultural matters provides an additional contribution to the leadership, national culture and EO literature. We discuss the implications of our theoretical arguments below, and also discuss the suggestions for future research.

Theoretical Implications

This research provides several important theoretical implications to the leadership, national culture and EO literature. First, we investigated that transformational leadership plays an important role in shaping employee perceptions of EO. In spite of strategic importance of transformational leadership in entrepreneurial business, there were limited literatures explaining the relationship between transformational leadership and EO. In this paper, we found that employees whose manager exhibited more transformational leadership had more positive perceptions of EO and help improving organizational
performance. We believe that our paper will invite further fruitful arguments on leadership study in entrepreneur business.

Second important implication is that our finding leads us to consider national culture perceptions as a direct predictor for organizational performance and EO. After Knight (1997) suggested EO possessing high cross-cultural reliability and validity, many researchers attempted to investigate and explain the cultural impacts on EO. However, there are still various counter arguments exist in this area. In this study, we clearly suggest that long-term orientation is key factors influencing organizational performance. Although we failed to find a direct relationship between long-term orientation and EO, we found that high long-term orientation stimulates organizational performance.

**Managerial Implications**

This study also has important practical implications for understanding cultural differences in entrepreneurial firms. East Asian entrepreneur companies having long-term orientation and strong transformational leadership tend to increase employee’s belief on the high organizational performance. This study also has important practical implications for understanding leadership and culture impacts in entrepreneurial firms. Practitioners should understand the importance of transformational leadership in shaping strong EO. It is also important to understand the practical relationship between long-term orientation culture and organizational performance. When transformational leaders suggest the long-term vision for their business, employees take the responsibility of actualize the suggested vision. In this paper, we argued that organizations whose founders exhibiting more transformational leadership create more strong organizational culture (EO) and this might eventually help improving organizational performance.
**Limitations and Future Research Directions**

Despite the theoretical and practical contributions of this study, it is not without limitations. First, organizational performance may not be a single factor that represents a fast economic growth. However, we believe that it is clearly one of the most important factors. Besides organizational performance, other factors such as government policies and collaborative teamwork between all economic actors should be considered as important factors that accomplish remarkable economic growth in a short period of time. For example, Lee and Peterson (2000) noted that economic, political, and social factors moderate the relationship between culture and EO. Thus, Future research might broaden potential micro and/or macro contributors for overcoming the economic crisis. Second, this study is based on a correlational research design which makes it difficult to establish the causal relationship between the variables. However, given that transformational leadership and long-term orientation are generally agreed as predicting variables in the organizational study, it is likely that it is the causal variable that impacts employee responses in the model. Future research might use longitudinal analysis to explore how employee perceptions of leadership and culture and its consequences change over time. Third, while we focused here on cultural impacts on organizational performance, future research might examine other meaningful ways to investigate cultural interaction impacts. One fruitful area for future research is to examine whether long-term orientation and uncertainty avoidance are related, either directly or indirectly to other important outcomes. For example, long-term orientation might be moderated by uncertainty avoidance and thus mitigate the positive relationship toward organizational performance. These East Asian cultural values seem to generate some psychological tensions among
employees. Therefore, it would be valuable to investigate the interaction relationship between them long-term orientation and uncertainty avoidance. As we mentioned earlier, there are still limited studies on the relationship between leadership, national culture and EO. We hope that this study will stimulate successive leadership, national culture and EO researches.

**Conclusion**

This study adds to our understanding of how East Asian entrepreneur organizations achieved significant economic growth overcoming tremendous crisis and how employee responses on EO vary for employees within cultural and leadership contexts. We shed light on leadership and cultural factors that influence EO, and the impact of EO on organizational performance. Our arguments clearly argue that both transformational leadership and long-term orientation positively influences organizational performance and that EO partially mediates these theoretical relationships. We hope that this study will promote future research related to how employee responses to EO develop and how these responses differ among different cultural contexts.
REFERENCE


Dirk D. C., and Imanol B. R. (2007) Organizational Commitment in Mexican Small and Medium-Sized Firms: The Role of Work Status, Organizational Climate, and


TABLE 1

Means, Standard Deviations, and Correlations among Study Variables\(^a\)

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<td>3.40</td>
<td>.65</td>
<td>.03</td>
<td>.10</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Long-term Orientation</td>
<td>4.00</td>
<td>.57</td>
<td>-.05</td>
<td>.06</td>
<td>.30(^*)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Entrepreneurial Orientation</td>
<td>4.61</td>
<td>1.49</td>
<td>.02</td>
<td>-.05</td>
<td>.21(^*)</td>
<td>.08</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6 Organizational Performance</td>
<td>3.90</td>
<td>.69</td>
<td>.14</td>
<td>-.14</td>
<td>.17(^*)</td>
<td>.32(^*)</td>
<td>.00</td>
<td>-</td>
</tr>
</tbody>
</table>

\(^a\)Correlations were computed within-group variables; \(N=178\)

* \(p < .05\)

** \(p < .01\)
TABLE 2

Results of Multiple Regression Analysis Predicting Influences on Organizational Performance$^a$

<table>
<thead>
<tr>
<th>Variables</th>
<th>Organizational Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\hat{B}$ ($\hat{\beta}$)</td>
</tr>
<tr>
<td>Status</td>
<td>.47</td>
</tr>
<tr>
<td>Education</td>
<td>-.14</td>
</tr>
<tr>
<td>Transformational</td>
<td>.18*</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
</tr>
<tr>
<td>Long-term Orientation</td>
<td>.39***</td>
</tr>
</tbody>
</table>

$\hat{B}$ = unstandardized coefficient, SE = standard error, $\hat{\beta}$ = standardized coefficient \[ \hat{B} (S_x / S_y) \].

$^a$ Analyses are based on listwise deletion; N = 178 for individual level variables

* p < .05, ** p < .01, *** p < .001
TABLE 3
Results of Multiple Regression Analysis Predicting Influences on Entrepreneurial Orientation<sup>a</sup>

<table>
<thead>
<tr>
<th>Variables</th>
<th>Entrepreneurial Orientation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\hat{B}$ ($\hat{\beta}$)</td>
<td>SE</td>
<td>$\hat{B}$ ($\hat{\beta}$)</td>
</tr>
<tr>
<td>Status</td>
<td>-0.04</td>
<td>0.75</td>
<td>0.11</td>
</tr>
<tr>
<td>Education</td>
<td>-0.16</td>
<td>0.18</td>
<td>-0.11</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>0.54**</td>
<td>0.18</td>
<td>-0.11</td>
</tr>
<tr>
<td></td>
<td>(0.24**)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term Orientation</td>
<td>0.26</td>
<td>0.10</td>
<td>0.22</td>
</tr>
</tbody>
</table>

$\hat{B}$ = unstandardized coefficient, SE = standard error, $\hat{\beta}$ = standardized coefficient [$\hat{B}$ $(S_x / S_y)$].

<sup>a</sup> Analyses are based on listwise deletion; N = 178 for individual level variables
* p < .05, ** p < .01, *** p < .001
### TABLE 4

Results of Mediation Analysis Predicting Influences on Organizational Performance$^a$

<table>
<thead>
<tr>
<th>Variables</th>
<th>Organizational Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\hat{B}$ ($\hat{\beta}$)</td>
</tr>
<tr>
<td>Status</td>
<td>.47</td>
</tr>
<tr>
<td>Education</td>
<td>-.14</td>
</tr>
<tr>
<td>Entrepreneurial Orientation</td>
<td>-.01</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>.18*</td>
</tr>
<tr>
<td>Long-term Orientation</td>
<td>.39***</td>
</tr>
</tbody>
</table>

$\hat{B} = \text{unstandardized coefficient, } SE = \text{standard error, } \hat{\beta} = \text{standardized coefficient [ } \hat{B} (Sx / Sy) \].$

$^a$ Analyses are based on listwise deletion; N = 178 for individual level variables

* $p < .05$, ** $p < .01$, *** $p < .001$
FIGURE 1
Model of Hypothesized Relationships
Leadership and Culture Matters: Empirical Investigation for the Mediating Mechanism of Entrepreneurial Orientation

Jae Hyeung Kang, Sang Chul Park, and Ayman Tarabishy

Abstract

Using survey data collected from the three entrepreneur firms located in South Korea, we empirically investigate the unique East Asian cultural value and leadership mechanisms explaining how East Asian entrepreneurial organizations achieved remarkable firm performance. In order to do so, we examine the influence of both long-term orientation based on Confucianism and employees’ perceived transformational leadership on organizational performance. We further examine entrepreneur orientation as an important mediator of these relationships. Our arguments have practical and theoretical implications for understanding how leadership, national culture, and organizational culture make important contribution on organizational performance.

Keywords: Entrepreneurial Orientation, Leadership, National Culture

Introduction

Western researchers admit that the East Asian countries such as China, Taiwan, and Korea achieved remarkable economic growth over the past decades (Franke, Hofstede, and Bond 1991). Although the financial crisis in 2008 threatened economic

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stabilities in those countries, East Asian countries showed fast recovering capability and several Asian entrepreneur organizations entertained unbelievable financial growth after the crisis. It seems that East Asian countries have a unique national value to overcome tremendous crises. Researchers attempted to explain the factors that made these impossible missions possible (Franke et al. 1991; Hofstede 1991; Karn 1979), but they have suggested somewhat broad explanations so far. Given this theoretical limitation, we clearly explain this growth mechanism among East Asian countries from leadership and national culture perspective. More importantly, we suggest entrepreneurial culture as an important mediation construct that can explain how East Asian countries and entrepreneur organizations made significant economic success overcoming various risk and obstacles.

An organization’s entrepreneurial orientation (EO) is a specific aspect of organizational culture that has extensive quantitative empirical research behind it. EO can be defined as the organizational culture that is represented through their risk taking, pro-activity and innovation (Miller 1983). Miller (1983) emphasized that all entrepreneurial organizations must innovate, take proactive action, and take risks. Specifically, Miller (1983) argued that, in general, theorists would not call a firm entrepreneurial if it changed its technology or product line (‘innovative’ according to our terminology) simply by directly imitating competitors while refusing to take any risks. While changing companies’ business process, a firm must to take proactive approach as well. By the same token, risk-taking firms, which are highly leveraged financially, are not necessarily entrepreneurial. They must also engage in product-market or technological innovation.
Thus, Miller (1983) reserved the label of “entrepreneurial” for firms which are concurrently risk taking, innovative, and proactive.

Although still in its infancy, this stream of research has highlighted some important factors, including contextual factors, and characteristics of the EO itself (Covin and Slevin 1991; Dickson and Weaver 1997; Dirk and Imanol 2007; Lumpkin and Dess 1996). We also note that researchers have endeavored to identify the theoretical and empirical relationship between national culture, entrepreneurship, and organizational performance (Ardichvili and Gasparishvili 2003; Kreiser, Marino, and Weaver 2002; Lee and Peterson 2000; Marino, Strandholm, Steensma, and Weaver 2002; Swierczek and Ha 2003). Despite this progress, the question of how East Asian’s long-term orientation culture and transformational leadership influence organizational performance has yet to be explored. In addition, the strategic mediation effect of EO on those relationships was not well articulated. Given these theoretical and empirical gaps, we believe that it should be valuable to investigate the empirical relationships between leadership, national culture, EO, and organizational performance. In this study, we will examine the key antecedents and consequence of EO. In so doing, we make three important contributions to the leadership, culture, and entrepreneurship literature.

First, we examine the mediation mechanism of EO on the positive relationship between transformational leadership and organizational performance. In this study, transformational leadership refers to “a longer term relationship established between a leader and followers, built up over many interactions and having a more organizational or strategic orientation” (Herold, Fedor, Caldwell, and Yi 2008, p. 348). This leadership style is one of the most frequently applied constructs in business literature (Bass 1985;
Bono and Ilies 2006; Burns 1978; Richer and Vallerand 1995; Rubin, Munz, and Bommer 2005). In addition, several researchers investigated various constructs such as self-efficacy belief (Kirkpatrick and Locke 1996), intrinsic motivation (Charbonneau, Barling, and Kelloway 2001), and organizational citizenship behavior (Boerner, Eisenbeiss, and Criesser 2007) mediating the relationship between transformational leadership and performance. Given these previous contributions, the importance of transformational leadership can not be neglected in entrepreneurship study as well. However, there are limited literatures investigating the relationship between leadership styles and entrepreneurship (for an exception, see García-Morales, Llorens-Montes, and Verdú-Jover 2006; Todorovic and Schlosser 2007). In this study, we examine how EO plays an important mediating role between transformation leadership and organizational performance. We expect the EO will provide strategic links between transformational leadership and organizational performance. Given this strategic importance of EO, we will contribute to entrepreneurship literatures by clearly identifying the theoretical relationship.

Second, we propose the mediation mechanism of EO on the positive relationship between national culture and organizational performance. Kreiser et al. (2002) point out that only one study (Knight 1997) has examined the psychometric characteristics of the Covin and Slevin’s (1989) EO construct in a cross-cultural setting. Applying Hofstede’s (1984; 1991) cultural dimension of long-term orientation, we explain unique East Asian cultural value of Confucianism and its direct and indirect influence on EO and organizational performance in workplaces. Although Hofstede (1991) attempted to address the relationship between long-term orientation and entrepreneurship, there is no
existing research that clearly demonstrates the relationship between long-term orientation, EO, and organizational performance. Since EO consists of sub-elements such as risk taking, pro-activity and innovation (Miller 1983) and Confucianism value contains critical entrepreneurial elements, we will be able to find the direct and indirect links between long-term orientation, EO, and organizational performance.

In summary, we build a theoretical model to examine how organizational performance is influenced by employees’ perceived transformational leadership and their long-term orientation culture. In addition, we explain the important mediation mechanism of EO between these relationships. The theoretical model is shown in Figure 1 and discussed below.

**Study Hypothesis**

**Transformational Leadership and Organizational Performance**

The debate over the nature of the leadership and performance relationship has not yet been resolved. Many researchers ascribe organizational performance to factors other than leadership, typically macro variables at the organizational or environmental level. For example, Meindl, Ehrlich, and Dukerich (1985) criticized that the attribution of performance results to the actions of leaders is most often the consequence of romantic fantasy rather than a solid description of a causal relationship. However, a review of leadership in organizations, with a focus on the leadership-performance relationship, counters the above arguments (Kaiser, Hogan, and Craig 2008; Victor, Francisco, and Antonio 2008). For example, Kaiser et al. (2008) clarified the construct of the leadership and performance relationship, pointing out the much prior research has centered on the
emergence and approval (by followers as well as supervisors) of leaders rather than on the effects that leaders may have on organizational performance outcome. In addition, there exist specific research studies that demonstrate that leaders can be the cause of organizational performance (Smith, Carson, and Alexander 1984) as well as well-designed meta-analyses (DeGroot, Kiter, and Cross 2000; Judge and Piccolo 2004) that support this conclusion. Moreover, prominent leadership scholars such as Bass (1985) and Yukl (2005) generally agree that leadership is positively associated with organizational performance.

In this study, we specifically argue that transformational leadership provides positive influence on organizational performance. Transformational leadership is based on the notion that leaders inspire and motivate individuals to perform at exceptional levels (Bass 1985). In this notion, transformational leaders themselves do not solely play a significant role on increasing organizational performance. More importantly, employees who perceived their supervisors’ transformational leadership are inspired to perform well in the organization. Given this, most leadership theories support that the leaders affect performance most strongly by their direct effects on followers (Bass 1985; Conger and Kanungo 1998; Kaiser et al. 2008; Kouzes and Posner 1987).

The next question is how perceived transformational leadership contributes to organizational performance. A central thesis of Bass's (1985) theory is that “transformational leadership goes beyond exchanging inducements for desired performance by developing, intellectually stimulating, and inspiring followers to transcend their own self-interests for a higher collective purpose, mission, or vision” (Howell and Avolio 1993, p. 891). According to an empirical study by Howell and
Avolio (1993), transformational leadership based on intellectual stimulation and individualized consideration generates advantages for organizational performance. From these studies, we note that leaders use transformational leadership as a strategic method to increase organizational performance. In recent transformational leadership study, Victor et al. (2008) noted that transformational leaders use knowledge and innovation to increase organizational performance. In addition, both Bass (1985) and Howell and Avolio (1993) clearly identified that followers under the influence of transformational leadership are inspired and motivated to work beyond their job related expectations, and these collective motivations and behaviors create more opportunities to increase organizational performance. As a result, the critical driver for organizational performance is inspired and motivated followers. In summary, transformational leaders can inspire and motivate their followers collectively maximize performance (Howell and Avolio 1993), and this process eventually improve organizational performance.

\[ H1: \text{Perceived transformational leadership provides positive motivational impacts on followers to improve organizational performance.} \]

**Long-term Orientation and Organizational Performance**

Researchers have identified certain characteristics of national culture and attempted to find some common characteristics based on various definitions about culture (Hofstede 1984; Schein 1992; Triandis 1989). Hofstede (1984) defined culture as “the collective programming of the mind which distinguishes the members of one category of people from those of another” (p. 389). The members of a group interacting for a certain period of time share assumptions, values, and artifacts, which in turn induce culture
Culture, then, defines structures and systems, guides management processes, impacts work-unit climate, and, ultimately, affects organizational performance.

Researchers studying national culture have developed various frameworks to understand cultural differences and have added important contributions to the cross-culture literature (Hofstede 1984; Triandis 1989). For example, Hofstede (1984) introduced several cultural dimensions, such as power distance, collectivism, masculinity, long-term orientation, and uncertainty avoidance. These frameworks have been frequently applied and explored by other researchers in the behavioral and cultural literature (Earley 1993; Gelfand et al. 2006; Lee and Peterson 2000; Marino et al. 2002; Swierczek and Ha 2003; Wheeler 2002). Among various cultural dimensions suggested by Hofstede (1984; 1991), long-term orientation is defined as “the degree to which people’s actions are driven by long-term goals and results, rather than the short-term need for immediate gratification” (Ardichvili and Gasparishvili 2003, p. 32). This dimension is also called “Confucian dynamism”, which refers to the long-term versus short-term orientations in life that appear to differentiate Westerners from Easterners. For example, East Asian countries such as China, Korea, and Hong Kong ranked the highest in the long-term orientation index while Western countries such as the United States and Canada were ranked relatively low (Hofstede 1991). This cultural dimension has been dominant traditional value in East Asian societies and still provides significant influence to East Asian employees.

Karn (1979) and Hofstede (1991) noted that the economic success of the Eastern during 1960’s and 1970’s could be attributed to common traditional cultural values and this has generated a competitive advantage for successful business activity. Based on this
notion, we argue that long-term orientation based on Confucianism positively influence on organizational performance. For example, Franke et al. (1991), in a study of economic growth in 20 countries over a 20 year period, found that high levels of long-term orientation were associated with fast economic growth in Asian countries. Franke et al. (1991) also suggested that Confucian dynamism is associated with national economic growth rates. This Confucian dynamism emphasizes the dynamic rather than the static values traditionally found in Confucianism (Franke et al. 1991). This historical data show a positive relationship between long-term orientation and national economic growth. In addition, Wang, Farh, and Luo (1999) argued that emphasis on HR practices of long-term orientation will positive influence firm performance. Since national economic growth is an aggregated outcome of each organizational performance within a country, we can anticipate that this cultural value is also positively associated with organizational performance.

In the long-term orientation dimension, there are important sub-elements that provide positive impacts to increase organizational performance. First, people in the long-term orientation culture are willing to subordinate themselves for an organizational purpose (Hofstede 1991). This collective oriented mindset requires a value that individuals sacrifice themselves for collective goals even in difficult situation and moment, and leads employees to attach to the organization as a form of long-term commitment. Second, people in long-term orientation culture respect for social and status within limits (Hofstede 1991). This cultural value leads employees to admit limited resources within current organization and to work hard in order to overcome this limitation. Third, long-term orientation emphasizes thrift, being sparing with resources
(Hofstede 1991). As a result, employees within long-term orientation culture traditionally regard thrift behavior as desirable to organizational success, and this collective attitude generates more opportunity to increase organizational performance.

**H2: Long-term Orientation perception based on Confucianism provides positive impacts to create more opportunities to increase organizational performance.**

The Mediating Mechanism of Entrepreneurial Orientation

We expect that employees’ perceptions of EO will be an important mechanism through which the predictors in the theoretical model (employees’ perceived transformational leadership and long-term orientation) influence organizational performance. We discuss these mediation propositions below by first considering the relationships between the two predictors and EO, and then the relationships between EO and organizational performance.

**Transformational Leadership and Entrepreneurial Orientation.** Entrepreneurial organizations generally have small number of employees compare to matured organizations. In this organizational context, leaders seem to be able to create organizational culture more prominently than large and matured organization (Schein 1992). Moreover, success of small business clearly depends upon leaders’ innovative business idea and their strong desires to implement business (Yukl 2005). Leaders not only choose the basic mission and the environmental context where the employees will work, but they also choose their employees who will implement the leaders’ business idea (Schein 1992). Therefore, leaders of entrepreneurial organization position themselves as an influential source of shaping organizational culture.
Transformational leaders appeal to their followers by getting them to accept a higher vision and exert themselves to accomplish that vision (Burns 1978). In an entrepreneur context, transformational leadership behaviors include articulating and presenting a clear vision for the new business opportunity, showing passion and enthusiasm for implementing the business idea, inspiring employees to align with the organizational goal by helping them understand the reasons for pursuing its business and the opportunities that the new business idea can generate, challenging employees to reexamine their assumptions and question old ways of doing things, and being sensitive to the needs and concerns of employees (Bass 1985).

From the leadership perspective, there are recent papers that explain the relation of transformational leadership with entrepreneurship (García-Morales et al. 2006) and innovation (García-Morales, Matías-Reche, and Hurtado-Torres 2008). I further argue about how the sub components of transformational leadership positively influence employees shaping high level of entrepreneurial culture (EO). There are several reasons why transformational leadership behaviors are likely to influence EO. First, transformational leaders have been shown to inspire and intellectually stimulate others to act in innovative ways (Burns 1978; Richer and Vallerand 1995; Yukl 2005), which will predispose their employees to be generally more receptive to innovative culture suggested by the leaders. Gumusluoglu and Ilsev (2009) found that transformational leadership positively related to organizational innovation that was measured with a market oriented criterion developed for developing countries and newly developing industries. Their finding suggests that there is a strategic link between transformational leadership and innovative culture within EO. In addition, Victor et al. (2008) suggested
that transformational leadership, in general, positively affects innovative behavior. Thus, transformational leadership would create innovative organizational culture. Second, transformational leaders generate enthusiasm on the part of employees and confidence that they can successfully implement immature business ideas and potential business opportunities (Bass, 1985). This is also likely to lead to employees having a more positive perception of the leader’s proactive attitude, because the entrepreneurial organization transforms its previous identity toward leader’s value, and thus employees within the organization will be able to fully identify their value with their leader’s one. This “organizational identity transformation” will lead organizations to shape proactive business culture within entrepreneur firms. Third, transformational leadership has been shown to relieve anxiety and induce positive emotions in followers (Bono & Ilies, 2006; Rubin et al., 2005). This will also influence the extent to which employees become more tolerant toward the potential risks and thus shape the positive emotion to take any internal and external risk against their job. If leaders do not successfully create the organizational culture, entrepreneurial organizations are exposed to risky environment and can not survive in a long run (Schein, 1992). As a result, leaders of small business have strong responsibilities to risk taking and continue to make their business profitable. This risk taking attitude of leaders should be successfully embedded in organizational culture where their followers are also willing to take risks. In summary, transformational leadership will positively influence to shaping innovative, proactive, risk-taking organizational culture.

**Long-term Orientation and Entrepreneurial Orientation.** We argue that employees’ long-term orientation perception based on Confucianism is positively related
to employees’ EO perception. Some of the successive studies with Hofstede’s (1991) framework tried to link the long-term orientation with entrepreneurial behavior. Although Hofstede (1991) did not specifically discuss about EO, his theoretical perspective on entrepreneurship suggested implicit insights for understanding national culture influence on EO. For example, countries with long-term oriented cultures (e.g., China, Taiwan, and Korea) seem to be generating more individuals with high entrepreneurial behaviors (Hofstede 1991; Ardichvili and Gasparishvili 2003). According to Hofstede (1991), the values at the long-term orientation are very Confucian oriented and supportive to entrepreneurial activities. From the East Asian perspective, Confucianism value provides subtle but significant influence on East Asian people’s work and life. Given this unique cultural value of long-term orientation, we propose a strategic linkage between long-term orientation and EO.

One of key principles of Confucian teaching is the virtue with regard to one’s tasks in life consists of trying to acquire new skills, focusing highly on education, and working hard (Hofstede 1991). For example, Korean and Chinese people heavily value on developing their educational background and acquiring new knowledge and skills. Moreover, East Asian entrepreneurs tend to generate creative and innovative idea based on their previously acquired knowledge and skills (Einhorn 2007). In addition, Lin (2009) empirically suggested that long-term orientation is positively related to innovation among major automakers in 14 countries. These proactive and innovative approaches emphasize the dynamic rather than the static values traditionally found in Confucianism (Franke et al. 1991). As a result, dynamic and future-oriented natures of Confucian value are relevant to enhance innovative and proactive culture among East Asian entrepreneurs.
(Allred and Swan 2004; Lin 2009; Nakata and Sivakumar 1996). Second, being patient and pursuing of whatever goals are essential assets as an entrepreneur (Hofstede 1991). Since Asian entrepreneurs keep the core value of persistence tenacity, they are willing to take any internal and external risk and develop their creative business idea into real service and product. These Confusion values will make entrepreneurs take any potential risk. Given this, entrepreneur firms based on long-term orientation tend to take innovative, proactive, and risk taking approaches in order to survive in severe competition. Therefore, employees’ long-term orientation perception based on Confucianism positively influences to their EO perception.

Entrepreneurial Orientation and Organizational Performance. According to Schein (1992), organizational cultures are basically shaped from three sources; “(1) the beliefs, values, and assumptions of founders of organizations; (2) the learning experiences of group members as their organization evolves; and (3) new beliefs, values, and assumptions brought in by new members and leaders” (p. 211). Schein (1992) points out that organizational performance effects are more likely to occur as a result of cultural values and beliefs that are accepted by organization members and that therefore guide their actions.

Previous research has demonstrated a significant relationship between EO and organizational performance (Covin and Slevin 1989; Covin and Slevin 1991; Naman and Slevin 1993; Rauch, Wiklund, Lumpkin, and Frese 2009; Zahra and Covin 1995). There are several conceptual and empirical literatures in favor of a linkage between EO and both individual and organizational performance (Block and MacMillan 1993; Covin and Covin 1990; Covin and Slevin 1991; Pearce, Kramer, and Robin 1997; Wiklund 1999).
The association between EO and high performance has led many firms to consider EO an important factor for success (Chadwick 1999; Rauch et al. 2009). In this study, we mainly focus on employees’ believes on their future organizational performance (Swierczek and Ha, 2003). Since there are various factors that directly and indirectly influence organizational performance and various measurement approaches on firm performance (e.g., revenue, net profit, and return of investment), it seems to be controversial to argue that EO is the most important and direct factor for improving organizational performance in general. However, the relationship between EO and employees’ believes on future organizational performance can be investigated with fairly objective approach. Given this, Swierczek and Ha (2003) designed measurement items that investigate employees’ perceived level of importance on their organizational performance. Covin (1991) also suggested that non-financial data can be used in entrepreneurship study to investigate the employees’ and managers’ perceptions towards the organizational performance because there is a strong correlation between financial and non-financial data.

In summary, our arguments in this section suggest that in addition to the direct effects of transformational leadership and long-term orientation on organizational performance, discussed in earlier sections, these factors will also influence organizational performance through their impact on EO. In other words, EO will partially mediate the positive relationship between transformational leadership and organizational performance, and partially mediate the long-term orientation and organizational performance.

**H3:** Employees’ entrepreneurial orientation perception partially mediates the positive relationships between transformational leadership and organizational
performance; such that transformational leadership is positively related to employees’ entrepreneurial orientation, which in turn is positively related organizational performance.

H4: Employees’ entrepreneurial orientation perception partially mediates the positive relationships between long-term orientation perception based on Confucianism and organizational performance; such that long-term orientation perception based on Confucianism is positively related to employees’ entrepreneurial orientation, which in turn is positively related organizational performance.

Methods

This empirical study was conducted at three entrepreneur companies that currently operate in Korea. In order to maintain the external validity, we controlled employees’ demographic characteristics and chose functionally similar companies. We invited employees in entrepreneur companies to participate in the study. Employees from all entrepreneur companies that were potentially impacted by the national culture participated in the study.

Research Design

The study utilized a non-experimental (naturally occurring) research design and individual level of analysis. Employees reported on their perceived transformational leadership and long-term orientation. In addition, employees reported on their perceptions of EO and organizational performance. In order to reach participants more easily, we collected the survey data through the web-based survey in which each participant was
assigned a unique ID number that safeguarded the individual’s confidentiality of their responses. Employees’ perceptions data formed the analysis in the study.

Participants

We sent out invitation e-mails to 480 employees which resulted in 178 employees (37.1% return rate) included in the study. We also collected data on gender (89.4% male), age (mean = 36.5), highest education level (65.7% with a Bachelors degree or higher), organizational tenure (75.0% less than 5 years, 21.6% between 6 and 15 years, 3.4% greater than 15 years), and tenure in current position (61.9% less than 2 years, 38.1% greater than 2 years).

Measures

Long-term Orientation. Bearden, Money, and Nevins’s (2006) 8-item scale was used to assess long-term orientation. Participants rated their long-term orientation perception on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items for long-term orientation include “Respect for tradition is important to me,” “I don’t mind giving up today’s fun for success in the future,” “I plan for the long term,” and “Traditional values are important to me” (alpha = 0.83).

Transformational Leadership. Transformational leadership was assessed using 12 items from Podsakoff, MacKenzie and Fetter (1990), whereby participants rated the leadership that their supervisors displayed within entrepreneur companies. These items represent four sub-dimensions of transformational leadership: charisma/vision, inspiration, intellectual stimulation and individual consideration. Sample items for each of these dimensions respectively are: “My boss has a clear understanding of where we are going”, “My boss inspires others with his/her plans for the future,” “My boss challenges
me to think about old problems in new ways,” and “My boss has ideas that have challenged me to reexamine some of basic assumptions about my work,” (alpha=0.92).

**Entrepreneurial Orientation.** Covin and Slevin’s (1989) 9-item scale was used to assess Entrepreneurial Orientation (EO). For each item the two end-points are briefly defined. Participants selected the number, from 1 (at one end) through 9 (at the other end) that best describes these business practices. Sample items for EO include “In dealing with its competitors, my firm typically initiates actions to which competitors then respond,” “When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, independent posture in order to maximize the probability of exploiting potential opportunities”, and “In dealing with its competitors, my firm typically initiates actions to which competitors then respond” (alpha = 0.90).

**Organizational performance.** Swierczek and Ha’s (2003) 7-item scale was used to assess organizational performance. Participants rated the level of importance that they attach to the factors as enterprise objectives, from 1 (not important at all) through 5 (very important). Sample items for organizational performance include “High revenue,” “Innovative leadership”, “Business stability,” and “Contribution to the community development” (alpha = 0.86).

**Control Variable.** Since some respondents in the study were both managers and employees reporting to their leader, we controlled for status (manager or employee). In addition, we controlled for educational background, because employees who have a higher educational background may perceive and response to the national and organizational culture differently to those who have a lower educational background. Controlling these variables, we were able to capture robust empirical relationships.
Analytic Approach

It is not easy to objectively capture and measure the aspect of culture in a context of country because there is an inherent heterogeneity within a country’s culture. It seems to be irrelevant to apply the homogeneous cultural characteristics on the entire country, because cultures can be significantly different from each other even within a single country. As a result, Hofstede’s work (1980) has been criticized for many of its conceptual and methodological issues due to the inherent heterogeneity within cultures (Parboteeah et al. 2005). In order to solve these issues, we needed to assess these cultural variables at the individual perceptions for capturing relevant data from the sample. Fortunately, there is several literature measured national culture at individual level (Earley 1993; Kirkman, Chen, Farh, Chen, and Lowe 2009; Wheeler 2002). Therefore, we also investigate national culture characteristics from individual perceptions.

Results

Table 1 shows the descriptive statistics and bivariate correlations for all study variables. Hypothesis 1 predicted that transformational leadership would be positively related to organizational performance. As shown in Table 2, transformational leadership was directly and positively related to organizational performance ($\beta = .17, p < .05$). Hence, Hypothesis 1 was supported. Hypothesis 2 predicted that long-term orientation would be positively related to organizational performance. As shown in Table 2, long-term orientation was directly and positively related to organizational performance ($\beta = .32, p < .001$). Hence, Hypothesis 2 was supported.
In order to analyze mediation effects of EO, we applied Baron and Kenny’s (1986) causal steps methods. Hypothesis 3 predicted that entrepreneurial orientation would partially mediate the relationship between transformational leadership and organizational performance. Specifically, we expected that transformational leadership would be positively related to entrepreneurial orientation, which in turn would be positively related to organizational performance. To test this hypothesis we first tested the relationship between transformational leadership and entrepreneurial orientation. The results of this analysis are shown in Table 3. As predicted, transformational leadership was positively related to entrepreneurial orientation ($\beta = 24, p < .01$). Next, we tested the relationship between entrepreneurial orientation and the organizational performance. However, entrepreneurial orientation was not positively related to organizational performance ($\beta = -.01, p > .05$). Thus, the effect of transformational leadership on organizational performance is somewhat mediated through entrepreneurial orientation. This analysis partially supports for Hypothesis 3.

Next, we tested the mediating effect of entrepreneurial orientation on long-term orientation and organizational performance. Specifically, we expected that long-term orientation would be positively related to entrepreneurial orientation, which in turn would be positively related to organizational performance. To test this hypothesis we first tested the relationship between long-term orientation and entrepreneurial orientation. The results of this analysis are shown in Table 3. Unfortunately, long-term orientation was not positively related to entrepreneurial orientation ($\beta = .10, p > .05$). Thus, we were not able to conclude that the effect of long-term orientation on organizational performance is
mediated through entrepreneurial orientation. This analysis does not support for Hypothesis 4.

**Discussion**

The purpose of this paper was to identify important leadership and cultural antecedents to employee perceptions of EO, to find the impact of such perceptions on employees’ beliefs on the future organizational performance. We proposed that perceived EO mediates the relationship between employees’ perceived transformational leadership and organizational performance, and between employees’ perceived long-term orientation and organizational performance. Therefore, our research on leadership and cultural matters provides an additional contribution to the leadership, national culture and EO literature. We discuss the implications of our theoretical arguments below, and also discuss the suggestions for future research.

**Theoretical Implications**

This research provides several important theoretical implications to the leadership, national culture and EO literature. First, we investigated that transformational leadership plays an important role in shaping employee perceptions of EO. In spite of strategic importance of transformational leadership in entrepreneurial business, there were limited literatures explaining the relationship between transformational leadership and EO. In this paper, we found that employees whose manager exhibited more transformational leadership had more positive perceptions of EO and help improving organizational performance. We believe that our paper will invite further fruitful arguments on leadership study in entrepreneur business.
Second important implication is that our finding leads us to consider national culture perceptions as a direct predictor for organizational performance and EO. After Knight (1997) suggested EO possessing high cross-cultural reliability and validity, many researchers attempted to investigate and explain the cultural impacts on EO. However, there are still various counter arguments exist in this area. In this study, we clearly suggest that long-term orientation is key factors influencing organizational performance. Although we failed to find a direct relationship between long-term orientation and EO, we found that high long-term orientation stimulates organizational performance.

**Managerial Implications**

This study also has important practical implications for understanding cultural differences in entrepreneurial firms. East Asian entrepreneur companies having long-term orientation and strong transformational leadership tend to increase employee’s belief on the high organizational performance. This study also has important practical implications for understanding leadership and culture impacts in entrepreneurial firms. Practitioners should understand the importance of transformational leadership in shaping strong EO. It is also important to understand the practical relationship between long-term orientation culture and organizational performance. When transformational leaders suggest the long-term vision for their business, employees take the responsibility of actualize the suggested vision. In this paper, we argued that organizations whose founders exhibiting more transformational leadership create more strong organizational culture (EO) and this might eventually help improving organizational performance.
Limitations and Future Research Directions

Despite the theoretical and practical contributions of this study, it is not without limitations. First, organizational performance may not be a single factor that represents a fast economic growth. However, we believe that it is clearly one of the most important factors. Besides organizational performance, other factors such as government policies and collaborative teamwork between all economic actors should be considered as important factors that accomplish remarkable economic growth in a short period of time. For example, Lee and Peterson (2000) noted that economic, political, and social factors moderate the relationship between culture and EO. Thus, Future research might broaden potential micro and/or macro contributors for overcoming the economic crisis. Second, this study is based on a correlational research design which makes it difficult to establish the causal relationship between the variables. However, given that transformational leadership and long-term orientation are generally agreed as predicting variables in the organizational study, it is likely that it is the causal variable that impacts employee responses in the model. Future research might use longitudinal analysis to explore how employee perceptions of leadership and culture and its consequences change over time. Third, while we focused here on cultural impacts on organizational performance, future research might examine other meaningful ways to investigate cultural interaction impacts. One fruitful area for future research is to examine whether long-term orientation and uncertainty avoidance are related, either directly or indirectly to other important outcomes. For example, long-term orientation might be moderated by uncertainty avoidance and thus mitigate the positive relationship toward organizational performance. These East Asian cultural values seem to generate some psychological tensions among
employees. Therefore, it would be valuable to investigate the interaction relationship between them long-term orientation and uncertainty avoidance. As we mentioned earlier, there are still limited studies on the relationship between leadership, national culture and EO. We hope that this study will stimulate successive leadership, national culture and EO researches.

**Conclusion**

This study adds to our understanding of how East Asian entrepreneur organizations achieved significant economic growth overcoming tremendous crisis and how employee responses on EO vary for employees within cultural and leadership contexts. We shed light on leadership and cultural factors that influence EO, and the impact of EO on organizational performance. Our arguments clearly argue that both transformational leadership and long-term orientation positively influences organizational performance and that EO partially mediates these theoretical relationships. We hope that this study will promote future research related to how employee responses to EO develop and how these responses differ among different cultural contexts.
References


Dirk D.C., and Imanol B. R. (2007) Organizational Commitment in Mexican Small and Medium-Sized Firms: The Role of Work Status, Organizational Climate, and


<table>
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*Correlations were computed within-group variables; N = 178

* p < .05

** p < .01
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\( \hat{B} \) = unstandardized coefficient, SE = standard error, \( \hat{\beta} \) = standardized coefficient \( \hat{B} (Sx / Sy) \).

Analyses are based on listwise deletion; N = 178 for individual level variables
* p < .05, ** p < .01, *** p < .001
TABLE 3

Results of Multiple Regression Analysis Predicting Influences on Entrepreneurial Orientation\(^a\)

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\(\hat{B}\) = unstandardized coefficient, SE = standard error, \(\tilde{B}\) = standardized coefficient [\(\hat{B} (Sx / Sy]\)].

\(^a\) Analyses are based on listwise deletion; N = 178 for individual level variables

* p < .05, ** p < .01, *** p < .001
TABLE 4

Results of Mediation Analysis Predicting Influences on Organizational Performance$^a$

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$\hat{B}$ = unstandardized coefficient, SE = standard error, $\hat{\beta}$ = standardized coefficient [ $\hat{B}$ (Sx / Sy)].

$^a$ Analyses are based on listwise deletion; N = 178 for individual level variables

* p < .05, ** p < .01, *** p < .001
FIGURE 1

Model of Hypothesized Relationships

Transformational leadership

Entrepreneurial Orientation

Long-term Orientation

Organizational Performance
The Study of Entrepreneurial key-factor in Taiwan Craft Creative Industry

Yen-Dan Lin  
Chao-Shiang Li

Abstract:
Taiwan has been advocating cultural creative industry since 2002 and craft creative industry has become one of the key industries promoted by the state. In the 2008, the sales and number of firms of Taiwan Craft Industry at top of all Culture Arts category industry. Craft Creative Industry is the more maturely developed among Taiwan Arts Industries. In this study, we conduct interview of 15 executive and entrepreneurs in craft creative industry. The Outline with the key factors of Craft Creative Industry is as following: Venture attitude of business founder and individual business, Entrepreneurial activity, Entrepreneurial aspirations and Entrepreneurial framework conditions (EFCs). From this research, we would present the conclusion of the success mode of craft industry and future research direction of creating craft industry, the management implication and suggestions in industrial policy.

Key Words: Taiwan Craft Creative Industry, Entrepreneurial Key Factor, Entrepreneurial Management

1. Forward

The development of the craft industry in Taiwan has a very long history. However, with the global economic structure changing, the craft industry has gradually shifted from the manufacture industry of mass OEM production and exports in early days to an art industry featuring local cultures embodied in the products with tremendous meaning of the change of times and a profound impact on the development direction of the industry. Since Taiwan initiated the cultural and creative industry promotion and cultivation policy 2002, the craft industry has always been one of the key industries to be promoted by the country. Taiwan has injected huge manpower and resources to include the craft industry as one the 13 cultural and creative industries and a key area of development for the country. However, the lack of the conceptions of comprehensive marketing and high added value on the part of the players-be them the operators making transformation or the newcomers - in the
craft industry in Taiwan makes the adequacy of their entrepreneurial ability an issue to be tested especially given that past studies on craft tend to focus on the artistic, esthetic cultural and historic aspects with little promotion of studies on the emerging craft industry.

2. From tradition to innovation: the craft creativity industry

With the unfolding of the Industrial Revolution in modern times, besides the manually produced “handicraft”, craft is called “Industrial Art”, “Mechanical Art” and “Technical Art” if processed by machines. The delicacy and deep cultural content of the crafts made by hands is being replaced by a great variety of articles produced by machines in large quantities (Zhuang & Xu, 2002.). In mid-19th century, the “Arts and Crafts Movement” in the Great Britain was instigated and inspired by John Ruskin and William Morris who did not but into the products mass-produced by machines. The movement flourished and spread across Europe. In Japan, Yanagi Soetsu initiated the “Folk Craft Movement” in 1926 for collection and preservation of crafts made by the folks. In Taiwan, Yen, Shui-lung is the person dedicated to the development of the art of handicrafts. It is apparent that crafts are closely related with the human life and cultural quality and a form swinging between art and commerce. The development of the craft industry is divided into 4 stages in Taiwan:

(1) 1945-1960

The labor force in Taiwan was exuberant during this period. The craft industry was dominated by handicrafts produced for everyday living purposes with close relevance to the general public life. The craft industry in Taiwan during this period was one of the industries actively supported by the government. The craft industry, characterized by low costs, labor-intensiveness and excellent skills, powered the post-war economic development of the island.

(2) 1970~ mid 1980s

The government continued to develop the handicraft industry and came up with two ideas: the “moderate wealth plan” and the “living room factory”. From that time to mid-1980s, part of the home-type OEM businesses had transformed into the model of small or medium-size processing factories to expand operation, marking the full
bloom period of Taiwan crafts exports. However, due to domination of the OEM model of the craft industry and replacement by the cheap and mass-produced plastic products after industrialization, the craft industry in Taiwan had an increasingly weak link with everyday living and finally became alienated from the life experience of consumers (Hsu & Yang, 2009).

(3) Late 1980s:

Impacted by exchange rate deregulation and appreciation of NT dollars, and competed by the cheap labor force of Southeast Asian countries and mainland China, the Taiwan’s craft exports was hard hit and lost its competitive edge with the scale shrinking as a result of industry outflows. The craft industry in Taiwan, unable to transform from the OME to the design business model, shrank rapidly. Meanwhile, the major diplomatic setbacks suffered by the country made many an intellectual turn to embrace the indigenous culture and arts. Against such a backdrop, many traditional crafts turned out to become the focal point of the art community. Some of the tradition-adhering craftsmen began to shift to a delicate artistic style with small quantities produced, forming a new wave of folk craftsmanship.

(4) 1990~present:

Cultural and spiritual activities had become an important part of the people’s life in Taiwan in 1990s. The craftsmen have always focused on honing their own skills and many polices were made to encourage and support traditional arts with a view to preserving and promoting the beauty of traditional crafts. The government has also provided incentives to culture and art, organized craft competitions and encouraged crafts creations to elevate the status of the art workers. The distribution channels of the crafts have shifted from the general daily supply market to the specific art market. The crafts in Taiwan has transformed from a production activity to an art creation one. The ideas of “integrated community development” and “industrialization of culture and culturization of industry” were proposed by the Council of Culture Affairs (CCA) in 1993 and 1995 respectively to arouse local awareness and discover the roots of traditional arts and culture through efforts to revive local cultural presence to confer more local cultural features to the crafts industry in Taiwan.

In the beginning of the 21st century, culture and knowledge related industries
have brought about new economic opportunities for all the countries. Taiwan at this point has launched the cultural and creative policy to include the crafts industry with an expectation that the industry, with artisticity and practicality would be rejuvenated in an environment where spiritual life and cultural quality are being emphasized.

3. The status quo and challenges of the crafts industry in Taiwan

According to the 2009 “Taiwan Cultural and Creative Annual Report” (Ministry of Economic Affairs, 2009), the craft industry has the largest number of businesses; however, there is no statistics on the people working in the industry. For the operation model, most businesses are individual workshops or simple home-type establishments rather than the larger size companies that can adopt modern management models. Simply structured, these businesses are not in an urgent need of modern financial management skills, making the increase of business relatively difficult. The people working in the craft industry tend to adopt the form of individual businesses and few operate their business as a company or corporate body. Generally speaking, the crafts industry in Taiwan is growing steadily with numerous retail businesses and better export performance for manufacturers. Despite better performance improvement for the corporatized organizations, small and medium size enterprises still dominate the crafts industry in Taiwan. The economic benefits increase with the degree of urbanization, showing uneven development of the crafts industry among different regions and the need for subsequent reform of operation strategies.

The second phase of the Cultural and Creative Industry Development Plan (2008 to 2013) is based on the ideas of “local esthetics and global vision” and actively promotes the construction and marketing of the core values of the crafts which cover both the cultural and industrial values to inspire the public to observe culture and art in their lives and uplift the esthetic upbringing and quality of the people for the sustainable development of the crafts industry in Taiwan. The two strategies of Crafts Industry Flagship Plan including “Innovative R&D Design” and “Marketing Channels Expansion”, the 3 Action Proposals as well as the 11 Key Point Plans are developed based on the Phase 2 plan (Chart 1).
Related studies show the following characteristics of the structure of the crafts industry in Taiwan (Ministry of Economic Affairs; Chang, 2009):

(1) Majority for retailers and mostly exports for manufacturers

To compare by industries, it is evident that retailers take up the majority of the craft industry in Taiwan. However, the crafts manufacturers that are at the core craft industry have the best performance in exports, an evidence of the uniqueness and international marketability of the crafts made in Taiwan.

(2) Majority of all and medium-size businesses and prevailing proprietorship

In addition, for the entire crafts industry, businesses with capitals less than 10 million NTDs take up 96% of the businesses in the industry, an evidence of majority of all and medium-size businesses in the crafts industry; the analysis of the organizational structure shows that the proprietorship-type manufacturers have the largest number with the percentage of 69%; the sales structure tells a similar story that revenues of the businesses are mostly under 5 million NT dollars.

(3) Long history and strong growth potential of the industry

Most of the businesses covered by this study have been operating for more than 10 years with a stable economic performance, an evidence of strong growth potential of
(4) Geographical distribution related to urbanization

The number of the crafts businesses is about 20% of the total number of cultural and creative businesses in all the counties and cities, an evidence of the important role of the crafts in the cultural and creative industry today. And the crafts industry in the cities of Taipei and Kaohsiung has a better performance on the average while the more distant eastern region and offshore islands are seeing the decline of the industry as a whole, an evidence of proportional relation of crafts industry with the urbanization of the cities.

Generally speaking, the crafts in Taiwan is growing steadily, however, there is still a room for growth in terms of both the total industry scale and economic performance, the weakness in each aspect has to be adjusted and improved to broaden and deepen the development of the crafts industry. Except for the few larger businesses that can apply the modern operation model, most businesses are individual studios or home-type establishments with very simple structures and no urgent need for modern financial management frameworks, making business growth relatively difficult.

4. The entrepreneurial experience and GEM theory structure

Why do entrepreneurs start businesses? What makes them do so? Since motivations are the factors that trigger entrepreneurial behaviors, how to inspire young people with entrepreneurial potentials to be engaged in the entrepreneurial activities and how to develop a social environment that fosters entrepreneurial motivations are important issues for the development of an entrepreneurial society and realization of entrepreneurial management activities. Timmons (1999), a well-known expert of entrepreneurial management in the U.S. suggested the three factors of success in the development of new businesses to be “opportunities, resources and teams”. In terms of the content of entrepreneurship, Shane & Venkataraman (2000) argued that an entrepreneurial activity must include the consideration that “factors of how, who and what would influence the discovery, assessment and use of opportunities” and therefore asserted that the studies on
entrepreneurship should focus on “the sources of opportunities”, “the process of opportunities discovery, assessment and use” and “the individuals discovering, assessing and using opportunities”. Dollinger (2003) suggested the three main characteristics of entrepreneurship to be “innovation and creativity, integration of resources and establishment of economic organizations and opportunities and ability to grow amid risks and in uncertain conditions”. To sum up, factors affecting the early success of businesses include: external conditions; management capabilities of entrepreneurial teams such as experience, expertise and teamwork; entrepreneurial management capabilities.

As entrepreneurial activities are closely related with national economic development (Acs & Szerb, 2007), understanding the conditions of entrepreneurial activities and the ways to enhancing entrepreneurship is a very important issue. Entrepreneurial activities are the spring of national economic development and can contribute to economic growth if they are vibrant. However, entrepreneurial activities are not like large or well-established businesses which can be measured with concrete ways and statistics. The surveys and studies on the new and potential entrepreneurs, therefore, are scarce. The Global Entrepreneurship Monitor (GEM) was formed against such a backdrop. The GEM surveys are a national-level entrepreneurial framework jointly developed by many international entrepreneurial scholars and practical experts, which deals with the impacts of entrepreneurial activities on job creations and economic growth. The system includes the social, cultural and political contexts, entrepreneurial framework conditions (EFCs), and related factors with a particular focus on the surveying of the conditions of early entrepreneurial activities (Chart 2).
5. Key entrepreneurial factors of crafts creative industry

This study conducted in-depth interviews with executives of businesses in the crafts creative industry, entrepreneurs facilitated by the Small and Medium Size Business Innovation Incubation Center and individuals aspiring to be engaged in the crafts creative industry. The reviews on the aspects of entrepreneurs, industry and policies based on the GEM theatrical frameworks such as attitudes, activities and aspirations entrepreneurial framework conditions (EFCs) are as follows:

(1) Attitude: opportunities and abilities

1. The crafts industry attaches importance to the ability of the customers to appreciate the artistic beauty and values of its products. The industry guidelines proposed by the operators in the crafts industry must be able to elevate the esthetic quality of the people on the crafts so as to appreciate the delicate crafts culture through the influence of competent government...
agencies.

2. Effective reduction of the defect rate of the products is the utmost issue for the crafts industry. The imperfections of crafts dramatically increase operation costs. To lower the impact of defect rate on the maturity of the product skills, the operators must be fully prepared.

3. It is necessary to strengthening the service spirit by education. Students at schools must be taught the service spirit of creating values for others and build others. The intent of businesses of helping others to do good things will generate something valuable in return and even enable them to do mass productions to become industrialized.

4. Lack of efforts on self-branding to increase consumer acceptance of the craftsmen in Taiwan.

5. The issues of ageing of wood sculptors and the possible cease of succession must be seriously addressed. It is therefore necessary to increase job opportunities for current craftsmen and foster a new generation of wood sculptors with the vocational education system.

6. It is necessary to improve the knowledge of the operators in marketing, financial management and enhance the circulation of local craft products.

7. It is necessary to improve the ability to explore the domestic and international markets.

8. The issue of lack of studies on the characteristics of indigenous cultures must be addressed.

9. The difficulties of finding distribution channels for local micro-type studios must be overcome.

10. The lack of product development and production that meets the modern life needs remains an issue to be resolved.

11. For the crafts education system issue, the basic crafts creative education should be incorporated into the compulsory education.

12. The key concepts of revive the crafts: taste (the integration of esthetics and life), industrialization (realization of techniques and productivity) and marketing (strategic expansion of markets and creation of new markets).

(2) Activities: initial period, growth period and withdrawal

1. The cultural and creative industry is faced with the image issues of branding and business commitment. Powerful government intervention is needed to reduce the problems and remove the obstacles of distribution and the marketing.

2. The challenges of brand ageing, transformation and innovation are present.
3. The development of the crafts in Taiwan today should not be limited to the art of “handicrafts”. It is necessary to add fashion elements to the crafts to expand vision to the design level and combine the “marketing”, “strategic exhibitions”, and “mass production” to form the “industrial chain”.

4. The operators may lose their competitiveness and withdraw from the market as a result of changing economic environment.

(3) Aspirations: innovation and values

1. The people are lack of aesthetic awareness in life.

2. The crafts industry has been challenged by the imports of the products from mainland China and Southeast Asian countries. The issue is even aggravated as it is very easy to pirate the design ideas. However, despite the easiness of copying of the product outward appearance, the operators all pointed out that the proprietary core techniques possessed by their businesses were not easy to be copied and distinguished their products from the copycats in terms of quality. Furthermore, different positioning of products is for consumers with different buying motives.

3. The crafts are being increasingly polarized with one direction being the mass-produced vessels for daily use purposes and the other the art crafts for visual appreciation purposes. The latter seem to present themselves as an art creation which is to be treated with respect and not to be tampered with, alienating themselves from the consumers who stress the practical use of crafts. The mass-produced vessels used by the general public return to the original purposes of the crafts, however create a fear that the artistic and aesthetic experience would be ignored or lost.

4. The expansion of the domestic market can be achieved by education. The popularization of the cultural and creative products in the life of the general public starts with the environment, government offices, designs and posting of promotion literatures, street furniture improvement, or even the improvement of the road works, etc. The designs of the government building materials and creative plastic bags can be provided to the production units to enhance the things seen in everyday life to beautify the environment.

5. The mentality issue: the importance and values of the crafts, cultural acceptance and environmental sustainability awareness and the crafts spirit promoted and
respected by the life crafts movement.

(4) EFCs

1. The limited economic scale of the domestic market necessitates government assistance in integrating resources to explore the international markets.
2. Adequate funding is required for maintaining normal operation. In most cases, an entrepreneurship will be in loss at the beginning and it takes time to break even and then become profitable. Without proper financial planning and management, failure is very likely as a result of inability to achieve the financial balance.
3. How esthetics takes deep roots in our education is key to the fostering of talent.
4. The policies must allow a condition favorable to the cultural and creative industry.
5. A cross-agency unit must be established for the promotion of the Chinese culture and introduction of the delicate Taiwan cultural products to the Chinese markets for greater acceptance.
6. The government units stationed abroad must be integrated to assist the businesses with the distribution channels to sell the brands from Taiwan.
7. The cultural messages contained in the products can be promoted abroad through the power of penetration.
8. It is necessary to build an industrial system complete with the upstream, midstream and downstream.
9. Copyrights and patent must be protected and operators should be encouraged to innovate and develop products. The inadequate protection of intellectual property rights has diminished the possibility of the development and production of quality craft products.
10. Raise of tariffs on imported craft products, provision of low-interest rate loans for business starting and investments and enactment of preferential tax act are recommended.
11. Promotion of the craftsman certification system is necessary.
12. The issue of the lack of a distribution structure to supply popular and high-quality craft products exists.

For the viewpoints to be considered by the operators of the crafts industry, in terms of the entrepreneurial and operating strategies, a two-way approach is recommended. The first strategy is solely based on the Taiwanese culture: (1) the culture of largest ethnic group on the island constitutes the backbone while cultures of other ethnic groups are incorporated. The integration of these ethnic and culture
features provides main elements of crafts designing and production; (2) Instead of being “worshipped” like artists, the so-called traditional crafts should be revived and new techniques and markets should be developed, which will require connection with the “new lifestyle”. (3) At the national policy level, studies must be conducted on why many crafts businesses not supported by the policy incentives turn out to flourish while the even more businesses receiving the “National Traditional Craftsmen” support on a long-term basis end up failing in both technique passing down and product sales. Secondly, the Taiwanese culture should be used on a strategic basis for sharing of tasks across the Strait: (1) Use the Chinese culture as the main elements of craft creation and production by combining of the cultural advantages of Taiwan and the mainland and capitalize on the industrial advantages Taiwan still enjoys; (2) build task sharing model for Taiwan and the mainland. Keep the R&D and marketing decision departments in Taiwan while production activities are carried out in the mainland; (3) broaden the range of crafts related industries for cooperation and even with different industries for promotion of the bigger task sharing model.

6. Conclusion

The Taiwan crafts are a meltpot of aboriginal, Dutch, Spanish, Japanese and Han Chinese cultural elements and have developed as an industry since the 17th century. The crafts in different periods are each has its distinct features, laying a profound cultural foundation and economic growth potential for the current crafts industry in Taiwan. The formation of global economic community and advancement of modern technology have brought about a new wave of industrial innovation to which the Taiwan crafts industry with a long history is of no exception. The government has promoted the cultural development, incorporated the cultural aspect into the crafts, used its resources such as cultural activities, legislations and competition incentives to rejuvenate the crafts and brought a new horizon to the Taiwan crafts. The future development of the Taiwan crafts are divided roughly in two directions: one for the inheritance of traditional culture as the preservation, maintenance and promotion of the traditional crafts; the other for the promotion of the local culture, image shaping of the local crafts and finding new direction of development for the local crafts.

In this study, we proposed future development of the strategy and management recommendations are as following:
(1) Specialization of organization task sharing

The crafts industry in Taiwan is still mainly formed by small and medium size businesses or even individual studios. However, this is no implication of the inability to reach the economic scale. If an industrial chain can be established effectively at the beginning of the entrepreneurship—be it the fineness of vertical task sharing, clustering power of price negotiation coming from the concentration of manufacturers and supply of the production lines—the operators can also expand the production scale and lower the costs and increase profits.

(2) Integration of the industry value chain

For the crafts industry to reach the effective economic scale, the connection of the industrial chain of the crafts industry is very important. The information exchange among the manufacturers requires a stable platform for the information to flow, achieving a relative advantage of lowered long-term average costs. Moreover, in view of the extreme difficulties experienced in the entrepreneurship, the structure of the numbers of years in operation shows a growth bottleneck for the crafts industry during the development process. Not only dose a business need favorable external conditions at the beginning stage, but also a support system to help it get through the difficulties, such as establishing the platform for exchange of the crafts talent, funding and business information and providing the aids to the manufacturers needing support. For the industry to grow steadily, sole reliance on the government support is not the way to go. From an economic perspective, only the fit survive and the weak are eliminated in a freely competing industry. The government should assume the role of the intermediary or matchmaker, not the aid provider to each business. The resources need to be properly applied and allocated.

(3) Development of overseas markets and enhancement of globalization

Both the export revenues and export percentage of the craft products are low in the industry, suggesting the dominance of the domestic market. The data of the industry divided in smaller categories shows that part of the crafts industry in Taiwan, particularly the manufacturers, has an outstanding performance in exports, an evidence that of the international market potential of the Taiwan crafts. The keys to a successful entrepreneurship should therefore include a long-term marketing plan and an emphasis on overseas market development to significantly increase the economic benefits and achieve the purpose of driving the economy with the crafts industry.
(4) Deepened development of the local crafts industry

The crafts industry is one of the few creative industries that are not limited by geographical conditions and instead develop the features. The development of the crafts industry with distinctive features therefore needs to be strengthened and innovation businesses encouraged at the local level. This, however, does not mean all the crafts have to be industrialized but that the craft items possible of industrialization will naturally be industrialized during the development of the crafts industry with local features. If the crafts with local features are to be appointed by the government, it would be to industrialize for just the sake of industrialization, the core cultural features will not be manifest. A cultural product would have no difference from an ordinary industrial product if it can not touch people. The natural and cultural features in each area of Taiwan are distinctive. Since the counties and cities already have the basic industrial structure, they should properly develop the industry to preserve the best part and discard whatever is inappropriate and concentrate all the resources on the most valuable crafts.

The assessment of the productivity of the crafts industry in Taiwan is yet to be established. There are basically three forms of businesses—studios, small and medium size businesses and big corporations in the industry with the former taking up the most manpower, the middle claiming the biggest market share and the latter having the smallest number. The crafts policy under the cultural and creative industry policy should use the production values of the industry as the measurement indicator with the focus placed on culture, art and creativity and the design conceptions as the way of realization. For entrepreneurship, the craft designs should include both the techniques and the artistic and cultural designs. In Taiwan, the concept of craft designs is quite limited to the technical level, just like architecture is classified under the school of engineering instead of the school of design or art, which emphasizes only the safety and practicality of the structures and ignores the esthetics of the art aspect. This study has summarized the key success factors of entrepreneurship for the reference of those who desire to be engaged in the creative and culture industry of crafts. The objective is for the craftsmen who are already working among the general public to improve their innovative design ability and guide the new generation of designers and entrepreneurs to incorporate the crafts and cultural features to maintain the competitiveness and innovation advantages of the crafts industry in Taiwan.

Reference


Council for Cultural Affairs, Executive Yuan, 2009. *Creative Taiwan - cultural and creative industries development program action plan*. Taipei: CCA.


GEM website: http://www.gemconsortium.org/


NTCRI website: http://www.ntcri.gov.tw/


The Study on Art-Culture Industrial Entrepreneurs and their Core Competency

Introduction

Li Chao-Shiang

Abstract:
Culture creative industry development is listed as one of the rising industries in Taiwan. However, as the statistical data of art-culture industry manpower are not available and the challenge of the bottleneck in incubation of talents in present art-culture industry are becoming the underlined worry of entrepreneurship of art-culture industry. The questionnaire survey pinpointed the visionary, musical and performance art, craft and exhibition facilities industries in Taipei, and recovered 253 valid copies. The study analysis of present situation of art-culture industry and studying relating factors affecting art-culture industry entrepreneurial core competency. According to studies, the overall core competency performance is between fair and satisfactory and individual traits are mostly of curious analyst. Background of entrepreneur and the establishment have significant difference in core competency performance, and based on the background factors of entrepreneur individuals and businesses, make prediction of the performance of core competency.

Key Words: Art - Culture Industry, Entrepreneur, Core Competency

I. Introduction

1. Origin of the Research

The Knowledge Economy first proclaimed by Drucker (1966) in last century is now entering the Creativity Economy Era of Howkins (2001). As an indicator for measuring the cultural creativity competitiveness of a country, the soft power of arts and culture has become the base of competitiveness of a country. In order to understand and get hold of the core competence of managers of arts and culture industry, we would like to present the background of research as the following:

(1) Arts and Culture Industry is the main target of the development of present cultural creativity industry

In 2008, Council for Cultural Affairs presented “Cultural Creativity Industry Development 2-Stage Plan” which proclaimed that NT$5.64 billion will be
invested between 2008 and 2011 to carry on promoting of cultural creativity industry (CCA, 2008) which covered fortifying of development of industrial environment, development of crafts and creativity industry and forward of creativity culture park and a sizable fund will be injected into cultivation of arts and culture talents and competence.

(2) Lack of Statistical Data of present Arts and Culture Industry Manpower

There is simply insufficient, if not none, statistical information of art related professional manpower market, and the employment market is vague in its rule and market prices, also these data are not included in culture or human resource statistics. The Taiwan Cultural Creativity Industry Yearbook published by Cultural Creativity Industry Promoting Team of Ministry of Economic Affairs is in its 5th edition but there is still lack of manpower statistical data in visual, music, performance arts and cultural exhibition and performance facility and craft industry, the main source of knowledge and creativity. (MOEA 2009)

(3) Challenge to Present Culture Industry Talent Cultivation

Due to the second renaissance (Naisbitt & Aburdene, 1990) most countries regarded arts and culture talents as the key force in guiding knowledge, creativity and aesthetic economy (UNCTAD, 2008; Naisbitt, 2006; Florida, 2002; Howkins, 2001; Landry, 2000). The demand of business world in MFA is not less than MBA (Pink, 2005), and major colleges have set up departments and schools of arts and culture management, and there are many extended courses offered by formal and informal education institutions. The massive need in extended learning signalize the rapid development of arts and culture and it also market the difference between the needs of industries and the educational system. We shall spell it further as the following:

1. Nurture of Arts and Management Talents are active in respective fields. Since 70s, US education world started to provide arts profession and business administration dual core programs training for students interested in arts and culture industry. It was in late 80s that Taiwan introduced Arts and Culture Management and Administration System, and the employment of professional art administration talents. They were initially nurtured by arts and culture groups through trial and error to cultivate talents to meet their needs. The arts administration and management has just risen with short history with limited base in talent nurture and it leads to gap between supply and demand. In Taiwan, there is lack of comprehensive manpower equipped with both languages of culture and economics and result in barrier of integration and communication of the two fields (Li, 2008). This is also another reason why the arts and culture industry is hard to develop. Overall, between arts management and business
administration, there is not only difference in development history, but also gaps in communication and integration, it is necessary to establish complete flow and exchange as well as practical operation experience (Ping, 2008).

2. Generation Fault of Manpower of Art Workers: between 1970 and early 1990s, the prime mover of Taiwan arts and culture came mainly from art galleries, music and performance groups, and the artists actively cooperating with them. Following the industrial forerunners entering academies to instruct in mid and late 1990, Taiwan Arts and Culture performing drive changed to the younger generation came from college and graduate school since late 1990. Yet, another problem of retention and loss of talents came up. It displayed in heavy loss of middle age talent and retiring of arts worker and difficulty in finding successors; the primary level workers lost the leaders that they could work with and learn from. These have serious impact on the cultivation of manpower in arts and culture industry.

2. Purpose of the Research

In view of the above historical background, for clear view of the core competence and development of Arts and Culture Industry Managers in Taiwan, this Research aimed at 1) Setting up the definition and context of core competence of Arts and Culture Industry Manager, 2) discussing the present reality of manager of Arts and Culture Industry and their core competence, and 3) Analyzing the factors that affect the core competence of managers in Arts and Culture Industry.

3. Scope of Research and Restriction

Arts and Culture Industry as studied in this research include: Visual, Musical & Performance, Exhibition and Play Facility and Craft Industries. Since Arts and Culture industries space distribution and revenue are mostly concentrate in Taipei City and Taipei County (MOEA, 2008), so this research focused on the two jurisdictions, and in proportional sampling principle in sending out questionnaires of 640 copies. The venture core competence of arts and cultural industry managers dealt in this research include General Knowledge Ability, Professional Skill, Administration and Business Management. The core competence of managers of arts and culture industry is concentrate in integral; general and needs based development in our discussion, without covering contents detail or structure of professional skill.

II. Literature Exploration

1. Arts, Culture and New Economy

In years of knowledge economy, the new economy industries originated from culture, art and aesthetic innovation will be the type of industry with the highest
value addition. In 1980s, French sociologist Bourdieu (1984) proclaimed the coming of culture consumption era. For culture industry, Andomo & Horkheimer of Frankfurt School called industrially manufacture of mass produced cultural commodity as culture industry. Throsby (2001) presented Arts Production Model and divided it into commercial oriented, non-commercial oriented and non-art work. While commercial creation aims mainly in cultural value and non-commercial oriented is in cultural value, but both of them are generating economic and cultural value. Arts has surpassed sport competition, human leisure time and money and gained absolute advantage. In 2008, spectator of MLB reached 1.4 billion, but museum took the lead of 8.5 billion (Mondello, 2008). Naisbitt (2006) said that the competition edge focused in the world is education emphasizing technology and arts education. Art is not a product and is not individual culture interest, but has become a life style. It is out of question that culture and art are indeed becoming the display of competitive edge of a country (Chu, 2005).

2. Content of Core Competence of Entrepreneurs of Arts and Culture Industry

Core Competence was first brought up by Prahalad & Hamel (1990) and they defined it as one combination of special skill or technology that can create benefit to customers, creating innovative products, extending market share, produce competition edge, and at the same time they can shape culture and value. Prahalad & Hamel (1994) regarded core competence as a combination of knowledge, skill and ability. Drucker (1995) further pointed out that Core Competence, Organization Environment and Mission is the 3 major elements in business management theory. After surveyed several multinational companies’ executives, Robert etc. (2000) summarized the key capacity of “Global Literacies”. And in this research, the content of core competence is theorized into: 1) Core Competence is integral synergy; 2. Core Competence is result of accumulation of knowledge; 3) Core Competence is a key ability; 4) Core Competence of members of an organization is also representing core competence of the organization; 5) Core Competence is an unique competitive edge; 6) Core Competence covers individual character, knowledge and skill; 7) Core Competence can be improve through training and development. In concluding the above, the key ability required by manager of arts and culture industry in arts and culture creation, execution and service related business are 10 General Knowledge Ability, 2) Professional Skill and 3) Administration and Business Management. In addition, this research combined MBIT personality attribute scale, identifying the preference in life, information collect, decision making and life style of an individual as the reference for studying background of an individual.

III. Design and Conduct of Research
Through exploration of domestic and foreign literatures, the research compiled initial draft of questionnaire and Likert Scale 5-point evaluation was adopted for answering based on fitness of own core competence in the scale from 5 points to 1 points in the sequence of Agreement. After completing interview outline and initial draft of questionnaire, the research adopted key case sampling and select 5 experts and scholars to review. The pre-questionnaire was put through Item analysis, factor analysis and internal consistency analysis (α in general knowledge ability is .897, in professional skill is .888, in administration and business management is .950 and in the full scale is .963). After correction through expert review and pre-questionnaire, the formal questionnaire, the core competence scale has total 47 questions. Please refer to the appendix. Samples of the research are art and culture industry of Taipei City and Taipei County and they were sampled in proportion. Total 640 copies were sent off and 253 valid questionnaire. The design structure of questionnaire is shown in the following Fig. 2.

<table>
<thead>
<tr>
<th>Basic variables</th>
<th>Research variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Basic Data</strong></td>
<td><strong>II. Core Competence</strong></td>
</tr>
<tr>
<td>1. Personal background</td>
<td>1. General Knowledge Ability</td>
</tr>
<tr>
<td>1) Sex</td>
<td>1) Personal general knowledge</td>
</tr>
<tr>
<td>2) Age</td>
<td>2) Social general knowledge</td>
</tr>
<tr>
<td>3) Highest education</td>
<td>3) Business general knowledge</td>
</tr>
<tr>
<td>4) With international arts / culture education / experience</td>
<td>4) Cultural general knowledge</td>
</tr>
<tr>
<td>5) Personal current monthly income</td>
<td>2. Professional skill</td>
</tr>
<tr>
<td>6) Main background of majored</td>
<td>1) Arts &amp; Culture knowledge profession</td>
</tr>
<tr>
<td>7) Years engaged in arts &amp; culture</td>
<td>2) Market applicable profession</td>
</tr>
<tr>
<td>8) Personal attributes</td>
<td>3. Administration and Business Management</td>
</tr>
<tr>
<td>2. Organization background</td>
<td>1) Administration</td>
</tr>
<tr>
<td>1) Years since founded</td>
<td>2) Product management</td>
</tr>
<tr>
<td>2) total number of members in the organization</td>
<td>3. Marketing management</td>
</tr>
<tr>
<td>3) Revenue in last year of the organization</td>
<td>4. Finance and human resource management</td>
</tr>
<tr>
<td>4. Type of industry of the organization</td>
<td>5. Innovation and integration management</td>
</tr>
<tr>
<td>5. Main products / services of the organization</td>
<td></td>
</tr>
</tbody>
</table>
IV. Data Analysis & Discussion

1. Art & Culture Industry Manager Basic Data Analysis

Table 1: Basic Data of Present Arts and Culture Industry Manpower (N=253)

<table>
<thead>
<tr>
<th>Individual Basic Data</th>
<th>Item</th>
<th>No.</th>
<th>Valid %</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sex</td>
<td>①. Male</td>
<td>117</td>
<td>46.2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>②. Female</td>
<td>136</td>
<td>53.8</td>
<td>1</td>
</tr>
<tr>
<td>2. Age</td>
<td>①. 25 or younger</td>
<td>13</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>②. 26-30</td>
<td>25</td>
<td>9.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>③. 31-35</td>
<td>52</td>
<td>20.6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>④. 36-40</td>
<td>49</td>
<td>19.4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>⑤. 41-45</td>
<td>44</td>
<td>17.4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>⑥. 46-50</td>
<td>27</td>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⑦. 51-55</td>
<td>25</td>
<td>9.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⑧. 56-60</td>
<td>16</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⑨. 61-65</td>
<td>2</td>
<td>0.8</td>
<td></td>
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<tr>
<td>3. Highest education</td>
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<td></td>
<td>②. College</td>
<td>113</td>
<td>44.8</td>
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</tr>
<tr>
<td></td>
<td>③. Master</td>
<td>111</td>
<td>44</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>④. Doctor</td>
<td>10</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4. International Arts &amp; Culture education and experience</td>
<td>①. Yes</td>
<td>89</td>
<td>35.5</td>
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</tr>
<tr>
<td></td>
<td>②. No</td>
<td>162</td>
<td>64.5</td>
<td>1</td>
</tr>
<tr>
<td>5. Personal income/ month presently</td>
<td>①. 25,000 or less</td>
<td>21</td>
<td>8.5</td>
<td></td>
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<tr>
<td></td>
<td>②. 25,000-30,000</td>
<td>11</td>
<td>4.5</td>
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<td></td>
<td>⑨. 90,001-100,000</td>
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<td></td>
<td>⑩. 100,000 or higher</td>
<td>24</td>
<td>9.8</td>
<td></td>
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<tr>
<td>6. Main background of majored study</td>
<td>①. Visual art</td>
<td>34</td>
<td>13.4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>②. Performance art</td>
<td>38</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>③. Music</td>
<td>18</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>④. Craft</td>
<td>16</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⑤. Museology</td>
<td>8</td>
<td>3.1</td>
<td></td>
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<tr>
<td></td>
<td>⑥. Information / science</td>
<td>10</td>
<td>4</td>
<td></td>
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<td></td>
<td>⑦. Business administration</td>
<td>19</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⑧. Arts management</td>
<td>36</td>
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<td></td>
<td>⑨. Journalism</td>
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<td>3.1</td>
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<tr>
<td></td>
<td>⑩. Social science / education</td>
<td>23</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□. architecture &amp; design</td>
<td>13</td>
<td>5.1</td>
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<tr>
<td></td>
<td>□. Others</td>
<td>31</td>
<td>12.2</td>
<td></td>
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<tr>
<td>7. Years in arts &amp; culture</td>
<td>①. less than 5 years</td>
<td>62</td>
<td>24.5</td>
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</tr>
<tr>
<td>services</td>
<td>5-10</td>
<td>10-15</td>
<td>15-20</td>
<td>longer than 20 years</td>
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<td>21.3</td>
<td>17.8</td>
<td>18.6</td>
<td>17.8</td>
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</tbody>
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8. Individual attributes

<table>
<thead>
<tr>
<th></th>
<th>Male Chauvinist</th>
<th>Challenge</th>
<th>General</th>
<th>Invention</th>
<th>Journalist</th>
<th>Public service</th>
<th>Adventurer</th>
<th>Expert</th>
<th>Scholar</th>
<th>Philosophy</th>
<th>Others</th>
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<td>1</td>
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<td>21</td>
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9. Years since founding

<table>
<thead>
<tr>
<th></th>
<th>Less than 5 years</th>
<th>5-10</th>
<th>10-15</th>
<th>15-20</th>
<th>More than 20 years</th>
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<td>2</td>
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<td>18.7</td>
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<td>3</td>
<td></td>
<td></td>
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10. No. of members of the organization

<table>
<thead>
<tr>
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<th>9 or less</th>
<th>10-49</th>
<th>50-249</th>
<th>250 and more</th>
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<td>1</td>
<td>134</td>
<td>78</td>
<td>27</td>
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<td>53</td>
<td>30.8</td>
<td>10.7</td>
<td>5.5</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Turnover last year (Million ,NT)

<table>
<thead>
<tr>
<th></th>
<th>Less than 100</th>
<th>100-500</th>
<th>500-1000</th>
<th>1000-2000</th>
<th>2000 and more</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69</td>
<td>64</td>
<td>26</td>
<td>21</td>
<td>54</td>
</tr>
<tr>
<td>2</td>
<td>29.5</td>
<td>27.4</td>
<td>11.1</td>
<td>9</td>
<td>23.1</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Type of industry

<table>
<thead>
<tr>
<th></th>
<th>Visual art</th>
<th>Exhibition /Play facilities</th>
<th>Craft</th>
<th>Performance art</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55</td>
<td>53</td>
<td>35</td>
<td>90</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>21.7</td>
<td>20.9</td>
<td>13.8</td>
<td>35.6</td>
<td>7.9</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Major product / service

<table>
<thead>
<tr>
<th></th>
<th>Art creation</th>
<th>Art education</th>
<th>Consulting/ broking</th>
<th>Art exhibition / sale</th>
<th>Museum / art gallery</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>72</td>
<td>34</td>
<td>14</td>
<td>71</td>
<td>48</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>28.6</td>
<td>13.5</td>
<td>5.6</td>
<td>28.2</td>
<td>19</td>
<td>5.6</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Individual

In this research, questionnaire recovered mostly from female and in the age group between 25 and 45 years old, education background is mostly college or higher and only 30% of them have international arts and culture education and / or experience. In personal income per month, the largest group is 45 persons (18.3%), between NT$40,000 and 45,000. Disciplines majored are diversified, indicating managers in this industry have high cross-discipline characteristics. Seniority in arts and culture is mainly concentrate in the group of less than 10 years. In personal
attributes, base on MBTI occupational characteristics, scholar is the highest (15.7%), male chauvinist (10.5%) is the next and journalist (10.1%) further next.

(2) Of organization

The recovered questionnaire of this research shows that 202 (71.5%) firms existed for more than 5 years since founding, and most of them have turnover last year less than NT$5 million, consistent with the survey of 2007 Culture Creativity Industry Development Year Book (MOEA, 2008). Total number of member is mostly less than 49 persons, meeting the result of Arts, Entertainment and Leisure Service General Survey of 2006 Industrial, Commerce and Service Industry Survey (Budget, Accounting & Statistics Office, 2007) and of small/ medium business entity. Major products / services are arts creation, exhibition and performance and sales.

2. Analysis and discussion of the present situation of Core Competence of Managers in Arts and Culture Industry

1. In overall perspective: Tend to agree to the core competences listed in this research, with Individual General Knowledge scored highest and the lowest is Marketing Management

2. In General Knowledge Ability Perspective: Individual General Knowledge is most agreed and cultural general knowledge is the lowest.

3. In Professional Skill Perspective: indicating the level of a manager identifying to own arts and culture knowledge profession. In contrast, managers are poorer in the market application profession, particularly in familiarity of arts and culture consumers and employment of new technology.

4. Administration and Business Management Perspective: Managers performs better in innovation management and team coordination, indicating the operation and management of arts and culture industry require innovation and input of manpower. In arts administration and in arts market management, they are poorer and these have impact in the control of domestic environment and in exploration of international market.

Table 2: Summary of Scoring in Various Perspectives of Core Competence

<table>
<thead>
<tr>
<th>Core competence perspective</th>
<th>Mean</th>
<th>Standard Difference</th>
<th>t</th>
<th>Order in perspectives</th>
<th>Overall order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full scale</td>
<td>3.8238</td>
<td>.51466</td>
<td>25.461***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.General Knowledge Ability</td>
<td>4.1426</td>
<td>.48908</td>
<td>37.161***</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### 3. Analysis of personal background factors affecting core competence of manager of arts and culture industry

#### (1) Discussing per perspective

1. **Overall core competence:** This shows significant difference due to difference in personal background of managers in age, highest education, personal monthly income, graduating background, seniority in the business and personal attributes.

2. **General Knowledge Ability:** This shows significant difference due to difference in personal background of managers in age, highest education, personal monthly income, graduating background, seniority in the business and personal attributes.

3. **Professional Skills:** This shows significant difference due to difference in personal background of managers in sex, international education and experience, personal monthly income, graduating background, seniority in the business and personal attributes.

4. **Administration and Business Management:** This shows significant difference due to difference in personal background of managers in age, highest education, personal monthly income, graduating background and personal attributes.

| Individual general knowledge | 4.2833 | .55249 | 36.945*** | 1 | 1 |
| Social general knowledge | 4.1159 | .57097 | 31.088*** | 3 | 3 |
| Business general knowledge | 4.1897 | .58571 | 32.309*** | 2 | 2 |
| Cultural general knowledge | 3.9816 | .64352 | 24.261*** | 4 | 4 |
| 2. Professional skill | 3.8110 | .63617 | 20.277*** | 2 | |
| Arts and culture knowledge specialty | 3.8798 | .75705 | 18.486*** | 1 | 5 |
| Market application specialty | 3.7536 | .68341 | 17.540*** | 2 | 8 |
| 3. Administration and business management | 3.6703 | .58581 | 18.200*** | 3 | |
| Administration | 3.4506 | .76508 | 9.368*** | 4 | 10 |
| Product management | 3.7095 | .71865 | 15.703*** | 3 | 9 |
| Marketing management | 3.3785 | .78414 | 7.677*** | 5 | 11 |
| Finance and human resource management | 3.7800 | .66675 | 18.607*** | 2 | 7 |
| Innovation and resource integration | 3.8755 | .61200 | 22.754*** | 1 | 6 |

*p<.05, **p<.005, ***p<.001*
(2) Discussing in the variables of personal background

1. **Sex**: not significant in all perspective, indicating that sex has no significant effect on core competence.

2. **Age**: There are significant differences in general knowledge ability, administration and business management among different age groups. Through Scheffe Post Comparison, in administration and business management the group between 41 and 45 years old is higher than group of 26-30 years old.

3. **Highest education**: Different education levels have significant effect on general knowledge ability, administration and business management as well as in full scale. Through Scheffe Post Comparison, it is found that managers with master and doctor degree are higher than those of lower than high-school, master degree managers are higher than college graduate. In overall scale, master and doctor degree managers is higher than college graduate and doctor degree is higher than below high school.

4. **International education / experience**: Difference in International Education and Experience has resulted in significant difference in professional skills. Through Scheffe Post Comparison, it is found that the core competence of manager with international experience is better than those without.

5. **Personal monthly income**: Different personal monthly incomes have significant effect on general knowledge ability, professional skill, administration, business management and in full scale. Through Scheffe Post Comparison, in administration and business management, managers with monthly income of 40000 to 50000 and 70000 to 80000 in NT dollar are higher than those less than 30000, group of 60000 to 70000 is higher than group of less than 40000. In administration, 60000-70000 group is higher than less than 40000. In overall scale, 60000-70000 group is higher than group of 30000 to 40000.

6. Graduating Discipline: Different graduating disciplines have significance difference in professional skill, administration and business management and full scale, but they did not pass Scheffe post test.

7. **Seniority in the field**: Difference in seniority in the field has show significant difference in general knowledge ability and professional skill. Through Scheffe Post Comparison, in general knowledge ability, manager with seniority of 15 to 20 years in the field has higher level of core competence than the one of 5 to 10 years and longer than 20 years is higher than 10 years or less.

8. **Personal attributes**: Difference in personal attributes shows significant difference in general knowledge ability, professional skill, administration and
business management and full scale. After Scheffe Post Comparison, it is found that in general knowledge ability, General and Invention type managers has core competence level higher than Philosophy type; in administration and business management, male chauvinism type, public service and adventurer are higher than philosophy type, general type is higher than journalist, scholar and philosophy types. In overall scale, general type and invention type is higher than scholar and philosophy types.

Table3: Summary of Effects of Different Background Variables on the Core Competence of Managers of Arts and Culture Industry

<table>
<thead>
<tr>
<th>Perspective Variable</th>
<th>General knowledge ability</th>
<th>Professional skill</th>
<th>Administration and business management</th>
<th>Full scale</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td>1. M 2. F</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>***</td>
<td>***5&gt;2</td>
<td>***</td>
<td>2.26-30</td>
<td>5.41-45</td>
</tr>
<tr>
<td>Highest education</td>
<td>***4&gt;1</td>
<td></td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education / experience</td>
<td>***</td>
<td>1&gt;2</td>
<td>1&gt;2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International</td>
<td>1&gt;2</td>
<td>3&gt;1,2;4&gt;1</td>
<td>3&gt;1,2;4&gt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal income</td>
<td>***</td>
<td>**</td>
<td>3,6&gt;2;5&gt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduating discipline</td>
<td>*</td>
<td>***</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seniority in the field</td>
<td>***</td>
<td>**</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal attributes</td>
<td>***</td>
<td>***</td>
<td>1,6;7&gt;10;3&gt;5,9,10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.005, ***p<.001

4. Sorting and Discussion of Open-end Questionnaire

(1) Challenges meeting Managers of Arts and Culture Industry in venturing into the business
It is topped with “Strengthening competitiveness of the industry”, indicating that overall competitiveness of arts and culture industry needs be promoted. As shown in Table 4, the top 5 are: Strengthening competitiveness of the industry, Resource integrating ability of Managers, Policy planning and execution, Domestic market environment and Business management ability of manager. This indicate the resource integration and business management ability of managers in arts and culture industry are rather insufficient (Xue etc., 2002) and the competitiveness of the industry, government policy support and domestic market develop are not strong enough.

Table 4: Descriptive Statistics Analysis of the Challenges meeting Managers of present Arts and Culture Industry of Taiwan

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>N=203</th>
<th>Valid percentage</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect of Manager’s competence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Business Management Ability</td>
<td>18</td>
<td></td>
<td>8.7</td>
<td>5</td>
</tr>
<tr>
<td>2. Resource Integration ability</td>
<td>22</td>
<td></td>
<td>10.8</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Culture Industry Aspect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Domestic Market Environment</td>
<td>19</td>
<td></td>
<td>9.4</td>
<td>4</td>
</tr>
<tr>
<td>4. Strengthening Competitiveness of the Industry</td>
<td>23</td>
<td></td>
<td>11.3</td>
<td>1</td>
</tr>
<tr>
<td>5. Policy Planning and Execution</td>
<td>21</td>
<td></td>
<td>10.3</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) Suggestions or Solutions

With Legislation of Subsidy top the list of suggestion indicates that managers are concern about the health of industrial environment provided by government. As shown in Table 5, the top 5 are “Legislation of Subsidy” “Rooting with Education” “Cross Disciplines Cooperation” “Product and Brand” and “Integration Platform” The results indicated that the government shall be urged to pass legislation, helping rooting of arts education to build sound environment for development, but also emphasize in product and brand management and the exchange integration platform among industry, government and academy.

Table 5: Descriptive Statistic Analysis of the Suggestions or Solutions Brought Up to Meet
with Challenge

<table>
<thead>
<tr>
<th>Category</th>
<th>Number, N=152</th>
<th>Valid percentage %</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product and brand</td>
<td>13</td>
<td>8.6</td>
<td>4</td>
</tr>
<tr>
<td>2. Cross-Discipline</td>
<td>14</td>
<td>9.2</td>
<td>3</td>
</tr>
<tr>
<td>Cooperation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Legislation of</td>
<td>25</td>
<td>16.4</td>
<td>1</td>
</tr>
<tr>
<td>Subsidy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Integration Platform</td>
<td>12</td>
<td>7.9</td>
<td>5</td>
</tr>
<tr>
<td>5. Rooting in</td>
<td>18</td>
<td>11.8</td>
<td>2</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

V. Conclusion & Suggestions

1. Conclusion

(1) Presenting conclusion based on the purpose of the research “Definition and Content of Coe Competence of Managers”

1) **Core Competence is discussed in 3 perspectives:** General knowledge ability, Professional skill and Administration and business management, total 47 questions and full scale reliance $\alpha$ is 0.963

2) **General Knowledge Ability is divided into:** Individual general knowledge, Social General Knowledge, Business General Knowledge and Cultural General Knowledge, total 12 questions and this perspective reliance $\alpha$ is .897.

3) **Professional skill is divided into:** Arts and culture knowledge specialty and Market application specialty, total 11 questions and this perspective reliance $\alpha$ is 0.888

4) **Administration and Business Management is divided into:** Administration Management, Product management, Marketing management, Finance and Human resource management and Innovation and Integration management total 24 questions and this perspective reliance $\alpha$ is 0.950

(2) **Conclusion presented per purpose of research “Reality of Manpower and Core Competence of Manager”**

1) **Reality of Manpower of Managers**

a. Individual: It is found in this research that Most of Arts and Culture Industry managers are female and in the age group of 25 to 45, of college education background and less of them have international education and experience.
Monthly income is in the range of NT$40,000 to 50,000. Majored disciplines are diversified which indicate high cross-discipline among managers of this industry. They engaged in this field only 10 or less years. In Personal Attributes, under MBTI Occupational Personality types, most of them are of scholar type and are curious analyzer.

b. Organization: The finding of this research shows that most of the organization have been founded for more than 5 years and turnover of last year is NT$5 million or less and total member of the organization is mostly less than 49, and is small / medium size; their main products / services are arts creation, exhibition and sales.

2) Reality of Core Competence of Managers

a. Overall perspective: Responders appears to agree to the core competence listed in this research and most agreed are the Individual General Knowledge under General Knowledge Ability and Marketing Management under Administration and Business Management scored the least.

b. General Knowledge Ability Perspective: Level of agreement is highest with personal general knowledge and lowest is culture general knowledge.

c. Professional Skill Perspective: Results indicate that managers are mostly identified to own arts and culture knowledge specialty. In contrast, managers are rather low in market application specialty in the industry, particularly in familiar with arts and culture consumers and the application of new technology.

d. Administration and Business Management Perspective: Research findings indicate that managers are better performed in innovation management and team coordination and the management and operation of arts and culture industry needs innovation and input of manpower. In administration and marketing management, they performed poorer, indicating that domestic environment is not clear and weak in exploration of international markets.

(3) Conclusion presented in accordance of research purpose “Factors affecting Managers’ Core Competence”

1) Difference in education level, international education / experience, monthly income and personal attribute on the overall core competence performance has significant difference.

2) Managers with different education level, international education / experience, seniority in the field and personal attribute have significant difference in their
general knowledge ability performance

3) Difference in international education / experience has significant difference in performance of professional skill

4) Difference in age, education level, international education / experience, monthly income and attributes has significant difference in performance in administration and business management.

2. Suggestions

1) Suggestions for promotion power of the industry

(1) Building power of the industry through cooperation in the trade and alliance among trades: Arts and culture industry players are mostly small or medium size and they set up marketing points through joining and / or linking with the trade or other leisure, tourism and festival industry to expand their field of performance. In the cross-field cooperation is not forcing one or more of the cooperating parties to learn from other party, but join together to create competitive product or works between the creator and high-tech people with their equipment.

(2) International exchange and cooperation to replace international competition: It is recognized that in the globalization era, competition with foreign arts and culture industry is inevitable. Domestic players shall be shut the market from foreign participant, but shall step out to develop international market to demonstrate the cultural creativity energy of Taiwan. With the exchange between and among countries, there will be benign competition through introduction of quality arts and culture performance to other countries and into Taiwan, and at the same time expands international vision and awareness of Taiwan players.

2) Suggestions on legislative support

(1) Acceleration of drafting and legislation of police and acts: Legislations for Arts and Culture Industry has been delayed for years and it has become a major reason that keeping domestic arts and culture industry from becoming healthier. Government and legislators are urged to establish related subsidy, guidance, support and tax preference ac, so that the operation of the industry has a clear route to follow, and help to stimulate growth of the market.

(2) Setting up dedicate agency to provide data and material of arts and culture industry: Bureau of Statistics of Australia has established National Culture and Entertainment Statistics Center to provide information about the
Australian Attitude toward Arts, and Benefits brought to the Country by Arts. On the other hand, since Arts and culture industry was included in national development policy in 2002, Taiwan is still lack of trade categorization and statistical data for this industry, that make people from viewing the full picture and blocking new comers.

The general suggestion of this Research is that it is necessary to establish Credential System and Industry Information Platform, placing attention on the development of talents in arts and culture media organizing, broking and critics, and help the involvement of all parts related in establishing Arts Venture Mechanism to develop knowledge economy based industrial power through industry platform and to form close network inside and outside the industry, and utilizing mass communication, commercial and educational mechanism to help and protect specialists in arts and culture and their entrepreneurial spirit.

Reference


Xue, B.X. etc., 2002. *Overview of cultural and creative industries survey.* Taipei: NCAF.

Small Business Transfer Outside of the Family:
Evidence from the French Actors Playing in the Web and Blogosphere

Katia Richomme-Huet, and Aude d’Andria*

In Europe, despite underrepresented scholars’ researches, less and less succession are taking place within the family. Consequently, firms are transferred to employees or third parties, especially in France. We investigate two primary questions. First, what is a business transfer outside of the family? Second, how can buyers reduce the opacity of the market and the cost of the information? We suggest investigating and analysing the online market. We notice that no sellers are directly present on the Web and that intermediates (both public and private institutions) endorse the lack of information for reducing uncertainty and decreasing information costs.

Introduction

Researchers, policy actors and practitioners agree on the fact that most current economies have a very large small business sector (Nieto and Santamaria, 2010). These micro, small and medium-sized enterprises (SMEs) add an important value to local, national and international economies (Liberman-Yaconi, Hooper and Hutchings, 2010). SMEs are essential and critical with regards to entrepreneurial activity, innovation, job creation, industry dynamics (Sheperd and Wiklund, 2005) and economies of countries (Liedholm and Mead, 1999). In the European Union, currently, up to 23 million enterprises fall within the scope of the SME definition (Commission Recommendation of the 6 may 2003). SMEs employ fewer than 250 persons for an annual turnover not exceeding 50 million euro and/or an annual balance sheet total lower than 43 million euro. These criteria are the standard approach for researchers, who considered them as a useful delineation (Davidsson, 2004) to facilitate

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comparisons between all European countries. Both, SMEs provide around 75 million jobs and represent 99% of all enterprises (European Commission, 2006).

Consequently, most governments implement a range of policy initiatives to enhance productivity and regional development in the SME sector (Locke, 2006). At a European level, a recent political engagement refers to the creation of a favoured environment in which entrepreneurship and SMEs are rewarded (Mandl, 2008). The Small Business Act of June 2008 gave special emphasis to business transfers (European Commission, 2008) and, consequently, to established business in the sense of Global Entrepreneurship Monitor (more than 3,5 years old). Indeed, business transfer is a major issue in Europe, with one in three company directors (owners-managers) in the retirement process, which affects an annual average of 690,000 businesses and almost 2.8 million jobs (European Commission, 2006). Moreover, figures suggest that the problem of business transfer is likely to become internationally more pervasive in the next decade (Meijaard and al., 2005). Undeniably, this phenomenon is not disconnected from any durable and persistent dynamic, but this is an actual and heavy tendency in all European countries. “It is estimated that one third of European companies will be transferred in the ten next years. After the phases of creation and development, the transmission constitutes the third crucial stage in a company’s life cycle” (European Commission, 2003: 3). Because of the importance of a successful transfer of ownership and management, there has been much written about the family business succession in the world literature (Harvey and Evans, 1995; Sharma, Chrisman and Chua, 1996; Koiranen, 2000), broadly defined as “the passing of the leadership baton from the founder-owner to a successor who will either be a family member or a non family member” (Beckhardt, and Dyer, 1983: 3). However, in Europe, less and less businesses transfer are taking place within the family and “more family enterprises will need to be transferred to employees or third parties” (European Commission, 2004). Though, business transfer within
the family remains notably underrepresented in Entrepreneurship and SMEs research literature, and there is a call for more research in the area (Malinen, 2004). The present study was conducted in France, to investigate two primary questions. First, what is a business transfer outside of the family? Second, how can buyers reduce the opacity of the market and the cost of the information? We begin by reviewing the past research, which has provided some insight into the small business transfer. Then we describe the nature of our data source and the methodology we applied to create the tables and graphs shown herein. This is followed by a series of propositions about the players involved in small businesses transfer. Next, we describe the results obtained from the analysis and, lastly, we briefly present the concluding remarks.

**Literature Review**

**Small Business Transfer**

Business transfer can be defined as the sale of the firm (Holmes and Schmitz, 1990) to family members, namely succession, or to third-parties, with takeovership (Richomme-Huet and De Freyman, 2010). According to European Commission and the Small Business Act (2008:6), an estimated 6 million small business owners will retire over the next ten years and only three options remain: the succession, the business transfer to a non-family member or the inactivation of the business (Malinen, 2004). The governments cannot afford to risk losing these businesses, their economic and social effects at regional and national level: “Recognition of the special role of SMEs and in particular family-based enterprises, their typically local base, socially responsible attitudes and capacity to combine tradition with innovation, underpins the importance of simplifying the transfer of businesses and the skills associated with them” (SBA, 2008:5). The emergence of an aging population and SMEs sector is still a focus point of public policy research (Bruce and Picard, 2006). The issue
conducts researchers to carry on with studies in business transfer, with a larger part of succession due to their significant portion in all countries.

**Small Business Transfer Within the Family**

Worldwide, family businesses are prominent economics players (Arrègle and Mari, 2010; La Portat, Lopez-de-Silanes and Shleifer, 1999; Shanker and Astrachan, 1996). In the US, they comprise an estimated 80% of the companies and 78% of the new jobs. Across Europe, we can consider the same proportion with about 70 to 80% of family businesses, but a minor contribution to employment with about 40-60% (FBN International Monitoring, 2007). According to Mandl (2008), the gap can be explained because of the size of the companies: a large share of European family businesses is SMEs, especially micro enterprises with less than ten employees. Nevertheless, their economic and social effects to job creation, self-employment and economic prosperity may be highlighted in order to help the increasing number of SMEs which face the challenge of business succession and/or business transfer to third party (family internal succession, tax issues, failure rates…). In their analysis of articles published in thirty management journals between 2001 and 2007, Debicki and al. (2009) showed that matter of succession constitutes significant portion of family business research (15,1%). In addition to traditional succession process models (from Hershon, 1975 or Handler, 1990 to Cater and Justis, 2009), scholars highlighted our comprehension of the actors (from Dyer, 1986 or Ward, 1987 to Sharma and Nordquist, 2007) involved in the business transfer. But, the main hypothesis is twofold: first the predecessor has offspring, and, second, he wants his son/her daughter to become the new owner-manager (and he/she gave his/her consent). But the facts are at variance with the researchers’ attention. The European nations are not facing the same reality: if in Germany (78%), Italy (78%) and the Netherlands, the majority of families intend to transfer the business to family members, only a quarter of
them are likely to be taken over within the family in Spain and, especially, in France (FBN International Monitor, 2007). So what will happen to these companies if the families want to discontinue the business?

**Small Business Transfer Outside of the Family**

A serious imbalance exists thus between the studies devoted to the principal option of proximity (intra-family succession) and the business transfer (Takeovership) to third-parties (Richomme-Huet and De Freyman, 2009). If we except Birley and Westhead (1990), Donckels (1995) and Howorth, Westhead and Wright (2004), selling out as an alternative to succession has received almost no attention in the literature (Debicki, Matherne, Kellermans and Chrisman, 2009). Birley and Westhead (1990) defined four choices open to the owner, if he does not consider succession: (1) Sale to a third party; (2) Sale to the management and/or employees; (3) Public quotation on the Stock Exchange; (4) Liquidation. If we apply these choices to SMEs’ owners, and especially to the companies with less than ten employees, we can eliminate the third option. Indeed, the mainstays of Europe's economy are micro firms, each providing work for two persons, in average (European Commission, 2008). Moreover, as we studied business transfer, the last option can also be removed. From the primary choices of Birley and Westhead (1990), we define two main choices, namely (1) succession (Intrafamily and Intrabusiness) or (2) sale (Extrafamily but Intra or Extra Business). Then, three options remain: (2-1) Sale to Management and/or employees; (2-2) Sale to a third party (personal entity); (2-3) Sale to another enterprise (third party as a legal entity). We summarize these choices in the following table.
### Table 1: Family Business Owner and Business Transfer Choices

<table>
<thead>
<tr>
<th>Option</th>
<th>CHOICE # 1</th>
<th>CHOICE # 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>SUCCESSION</strong></td>
<td><strong>SALE</strong></td>
</tr>
<tr>
<td>Transfer</td>
<td><strong>Intrafamily</strong></td>
<td><strong>Extrafamily</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Intra-business</strong></td>
<td><strong>Extra-business</strong></td>
</tr>
<tr>
<td>To whom?</td>
<td><strong>To heir</strong></td>
<td><strong>To a third-party,</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Personal entity</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>To a third-party,</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Legal entity</strong></td>
</tr>
<tr>
<td>Literature</td>
<td><strong>SUCCESSION</strong></td>
<td><strong>MBO/MBI ESOP</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>BUY OUT</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MERGER AND ACQUISITIONS</strong></td>
</tr>
</tbody>
</table>

*Source: De Freyman and Richomme-Huet, 2010.*

In the innovation-driven economies, including France (GEM, 2009), the positive reasons expressed behind discontinuing businesses represent 40%: 20% for “personal reasons”, 7.8% for “retirement”, 7.8% for “opportunity to sell”, and 4.4% for an “exit planned in advance” (GEM, 2009:20). When an owner-manager decides the passing of the leadership baton (Beckhardt, and Burke, 1983) to a new individual, it is not a trivial decision. The circumstances of the selling, the strategic choice taken and the process used to exit the family from the business will affect the owner’s eventual lifestyle (Birley and Westhead, 1990) and the survival or failure of the company. According to these authors, two main results emerge from their study in the UK. First, the most frequently used exit route is private advertised sale. Second, they notice that more firm were sold outside of the family, with a “strategic loosening” in the corporate market-place. According to De Freyman and Richomme-Huet (2010), the buyers on this market may be third-party (Extrafamily and Extrabusiness) or employees (Extrafamily but IntraBusiness). Managers and/or employees can obtain information from the owner about the sale of their company (Scholes, Wright, Westhead, Burrows and Bruining, 2007), but what about private buyers, who know neither the company nor the owner? Where can this category of buyers find information and private advertised sales?
The Lack of Information and the Endorsement

Studies (European Commission, 2004; Transregio, 2006; PricewaterhouseCoopers, 2007; KGMP 2008) show that one of the problems for the small businesses transfer is conjointly the opacity of the market and the cost to acquire information. One of the most important characteristics of family businesses is the strong interrelationship between the family and the business. In contrast to non-family businesses, they know each other since a long period, which facilitates the built of trust and confidence, the transfer of knowledge, technology and information (de Massis, Chua and Chrisman, 2008). When the transfer is outside of the family, all information remains localized in the company and private. The owner knows that the business he has exploited and the firm he has created has economic value. So, he wants to preserve its confidentiality. Moreover, theories on asymmetric information confirm that owners are significantly better informed than any outsider (Storey, 1994). The owner knows more than the transforee the weak and strong sides of his business. But the buyers need to find information about the targeted company. The questions are: what sort of information? Where can they find it? How can they trust the ones they found? Even if they can locate the appropriate information, they might question its veracity, the reputability of the source, the possible conflict of interest, the reliability and the recentness (Sorenson and Stuart, 2009). Buyers are uncertain about the true value of the company they want to acquire. They need advices and evidences. “In such situations, actors with credibility both in the information they provide and in their ability to assess the quality of potential partners can resolve this uncertainty when others observe their choices. Parties in such advantaged positions can include both public and private institutions” (Sorenson and Stuart, 2009: 532). They also introduce the idea that endorsements by the state (or by European Commission in our situation) help to reduce uncertainty, meanwhile endorsements by minor partners may provide useful signals or information regarding the true quality of potential sellers. If we
except buyers and sellers, different players influence the environment of the business transfer such as institutional (European commission, national government, regional institutions, banks, employers’ organizations, chambers of commerce, nonprofit organization, mentors,...) and brokers (providers of support services, advisors, accounters, lawyers...). In France, for instance, the Chambers of Trade have created a national virtual marketplace for buyers and sellers who are interested in enterprises in the craft industry. After evaluating the applicant companies, the advisers disseminated the successful offers on the “national enterprise exchange for craft enterprises”, namely BNOA (www.bnoa.net). They can also provide support and accompany the transfer process during the different steps. Transferees (buyers) and transferors (sellers) need trustworthy intermediaries and database host organizations.

**Research Methodology**

We carried out research for an exploratory empirical study of French actors playing in the Web and blogosphere. The validity of our data depends on same validity and evaluations than other types of qualitative data (Denzin and Lincoln, 1994). To conduct this type of method, Füller, Jawecki and Mülbacher (2007) recommend following four major steps: (1) Research objectives definition; (2) Observation and data collection; (3) Data analysis and insuring a reliable interpretation (triangulation with others methods of investigation); (4) Enforce an ethical code (in connection with the non participatory observation method). To gain greater understanding of the transfer business practices, we identified and analyzed the body of websites where the primary topic of interest was related to entrepreneurship and venture creation or venture taking over.

**Data and sample size**

Due to the nonexistence of a ready to use Websites database on Transfer Business, the sample used in this paper was constructed from the French Webpages provided by Internet. Our
sample size consists of websites and blogs that explicitly mentioned “entrepreneurship, takeover, buyer, seller, advisers, private advertised sale” without placing boundaries on time period. Given that business transfer is a relatively narrow research stream, we wanted to explore every websites on the subject. First, we start the sample identification with a search query on Google, from the keywords “business transfer” (74 000 results at all). From the given links, we create a panel data, which consists of 123 webpages, namely websites and blogs. Data collection has been staggered over a period of six months in order to check the webpages’ life expectancy. We conducted the analysis of the sites until saturation and redundancy. This constitutes the sample used for our coding scheme and content analysis that follows. A complete list of the names of 123 websites used in our review is presented in the Appendix 1.

We have introduced information from the following relevant variables: name of the web and its link; characteristics of the web domain (distinction between websites, weblogs or forums: while a website presents information from wide sources and relative to a common address URL, a blog is an online personal journal with regular entries, reflections and comments, and a forum is an online discussion site); origin of the sector (distinction between public or semi-public sector such as State Agency or Chamber of Commerce, and private sector, namely consultant or business corporation); actor on the online business transfer (potential transferee or “buyer“ who wants to take over a business; future transferor or “seller” who wants to sell his firm, and intermediates or “others” who provide a mediation service, from impartial institutions or private companies, namely brokers, professionals in the business transfer); and cost to acquire information (distinction between free of charge or not free: one can find plenty of information, advices or tools to help entrepreneurs starting, running and/or growing their business).
Because this represents a preliminary study, we have only taken into account these items. This is based on the idea of findings relevant differences between our groups. Our data collection includes 123 websites and excluded none. The sample may be temporally biased: the webpages, especially blogs, although they have historical value, can present possible obsolescence. Indeed, individuals might stop to maintain their online journal; regularly, the webmaster cleans the webpages, even more when the blogs are hosted on an institutional website. Nevertheless, it would be interesting to include in future analysis, the precise classification of each webpages and its various contents.

**Findings and Discussion**

Table 1 provides some descriptive statistics of the data collection.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web domain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web site</td>
<td>55</td>
<td>44.7</td>
</tr>
<tr>
<td>Blog</td>
<td>68</td>
<td>53.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Origin of sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td>55</td>
<td>44.7</td>
</tr>
<tr>
<td>Private sector</td>
<td>68</td>
<td>53.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Actor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buyer</td>
<td>32</td>
<td>26.0</td>
</tr>
<tr>
<td>Seller</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>91</td>
<td>74.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Cost to acquire information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free of charge</td>
<td>93</td>
<td>75.6</td>
</tr>
<tr>
<td>Not free</td>
<td>30</td>
<td>24.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

First, the web domain excludes entirely the forum: there is no forum about business transfer in our sample. The webpages are balanced between websites and blogs, with a larger representativeness of the blogs (53,3%). This is probably a biased result, because of a website which develops blogs to favor exchanges ([http://blog.apce.com](http://blog.apce.com)). By coincidence, results are the same considering the origin of the sector, with an advantage for the public (44,7%) against
private (53.3%). In France, the public sector uses to be present on administrative and formal procedures; institutional leave the business activities to private sector. Moreover, we notice the same scattering in real life than in online: even if improvements have been realized, there are still various and numerous public services for each entrepreneurial action.

More significant, there is no seller in the Web. This result confirms the opacity of the market and the secrecy around the business transfer. The owners prefer to keep their information and they protect their business from unknown online visitors. We can easily image the employees’ surprise and confusion if they discover that the company they work on is on sale. A business transfer, as a key step in a company’s life, can destabilize the stakeholders. The sample majority is constituted by all the intermediaries (91%) who hover around business transfer process: institutional and practitioners. This result confirms the complexity and the extent of the process, which needs various skills and knowledge in different fields, such as economical, legal, social and psychological ones. A quarter is component of buyers (26%), but more often potential transferees in a starting process rather than firm’s purchasers.

Lastly, the three quarter of the websites (75.6%) provides free access to information. The cost to acquire information is rather free of charge. For business transfer, the Web is significantly a tool for diffusing suitable and relevant information. Indeed, SMEs’ owners-managers and/or potential buyers have limited financial means: they need strategic information to preserve their resources and to involve them in the purchase, rather than in the search of the ideal company.

In this exploratory research, we wanted to know if there is statistically significant correlation between all variables for the total sample. Thus, chi-square independence tests are first examined (appendix 2). Then, bivariate relationships are examined using Pearson product-moment bivariate correlation statistics (Table 2).
The results show that there is a bivariate correlation statistic between all variables for the total sample. Moreover, we notice that the web domain (websites and blogs) has almost no influence on the actors \( (r= -0.459; p<0.01) \) who will use it and on the cost to acquire information \( (r= -0.479; p<0.01) \); it also not constrained the origin of the sector \( (r= -0.215; p<0.05) \). Indeed, the access on Internet must go through one of these medium, namely websites or blogs. These tools, accessible via Internet, foster successful company transfers (European Commission, 2006).

Although these findings make intuitive sense, other findings seem to run counter to expectations. For instance, the marketplace provides more platforms for bringing together potential buyers and sellers. Our results show that no sellers are “present” on the web domain; they are more “virtual” than the Web. Nevertheless, many webbased business transfer “bourses” have been established, varying in terms of the legal status of the provider (European Commission, 2006). Our study confirms that the origin of sector (public or private) is significantly correlated with the actors \( (r=0.437; p<0.01) \) who intervene: 26 buyers are in

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### Table 2 – Pearson Correlation between all variables for the Total Sample

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Web domain</td>
<td>Correlation de Pearson 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilatérale) .249</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Covariance .249</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Origine of sector</td>
<td>Corrélation de Pearson -217*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilatérale) .016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Covariance .054 .249</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Actor</td>
<td>Corrélation de Pearson -459**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilatérale) .000 .000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Covariance -.202 .192 .776</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cost to acquire information</td>
<td>Corrélation de Pearson -479**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilatérale) .000 .006 .000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Covariance -.103 .053 .128 .186</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>1,5528 1,5528 2,4797 1,2439</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std Deviation</td>
<td>.49923 .49923 .88104 .43119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>123 123 123 123</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the level 0.05 (bilateral).  
** Correlation is significant at the level 0.01 (bilateral).
public sector and 62 intermediates in the private sector (appendix 2). In parallel, a heavy link appears between origin of sector and cost to acquire information ($r=0.244$; $p<0.01$), but both favor the free information (at least, in the first approach).

Lastly, the buyers only provide free information (100%), which is the best strategy in the first step of the business transfer. Two-third of the intermediates uses the same logic in order to attract potential customers. The influence between these two variables is very significant ($r=0.337$; $p<0.01$).

**Contributions**

In spite of a growing body of theoretical and empirical research in succession, the business transfer outside of the family is quite limited and notably underrepresented in Entrepreneurship and SMEs research. Thus, we had two objectives when we began this research. First, we wanted to investigate what is a business transfer outside of the family. Secondly, how can buyers reduce the opacity of the market and the cost of the information? This research makes three specific contributions to emerging research focusing on business transfer outside of the family.

Theoretically, we add to knowledge of business transfer started by Ambrose (1983), Malinen (2004), Stund and Melin (2008) and make a contribution to entrepreneurship and small business literature because, to the best of our knowledge, the perspective of selling out as an alternative to succession has received almost no attention in the literature. We argued that SMES’s owners have two main choices, namely (1) succession (Intrafamily and Intrabusiness) or (2) sale (Extrafamily but Intra or Extra Business). Then, three options remain: (2-1) Sale to Management and/or employees; (2-2) Sale to a third party (personal entity); (2-3) Sale to another enterprise (third party as a legal entity).
Empirically, we analyzed a Websites database on transfer Business, especially a French Webpages provided by internet. In this densely inter-connected world, much of the communication and the information exchange happens online. Recently, Sorenson and Stuart (2008, p.538) propose a focus on some of the new research in Entrepreneurship on the problems of uncertainty reduction, the transmission of private information and “the role that online interaction may play in fostering and shaping entrepreneurial activity”. Our sample is based on more hundred (N= 123) institutions, brokers and individual webpages. Preliminary evidence was presented that suggests that the web and the blogosphere serve to facilitate the match making between potential buyers and third parties who offer a mediation service. Thus, the new technologies, especially web 2.0, offer professional information and advices with original means of answering the opacity of market and the cost to acquire information.

Practically, we wish to offer policy makers, practitioners and all the small businesses’ actors another point of view and others insights, to encourage a no discrimination between nascent or young ventures and long-time or old ventures, such as an Equal “Employment opportunity for the small companies.

**Limitations and Next Steps**

There are several limitations to our empirical investigation. The first limitation is the heuristic method of data collect and the small size of our sample of websites. The sample is somewhat biased because we wanted to get enough answers to begin our exploratory research. The question is to know when to stop and when to be sure that the analysis of the sites is conducted until saturation and redundancy. The next step of a future research may probably examine more websites to answer this point.

The second limitation is our choice of a small list of aggregated items: characteristic of the web domain (item#1), origin by sector (item#2), actor on the online business transfer
(item#3) and cost to acquire information (item#4). Thus, we are able to provide only emerging evidence from the French small business transfer outside of the family on the Web. The next step of a future research may probably deep our measurement approach of theses dimensions. Moreover, others items, which have not been include in this study, may complete the future research. That is why, any conclusion could be generalizable.

Finally, this paper investigated small business transfer outside of the family to provide some pointers for the direction of future research. Our study focused on actors playing in the Web and blogosphere. In fact, actors in the small business transfer are dispersed among different individuals and entities. Hence, the exponential development in the Web of websites and blogosphere offers new opportunities to get information or advice and meet business partners. Even if virtual connections may change the volume and the nature of information exchanged, we envision that the rate of actors stay the same as in the physical-world connections.

References


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http://europa.eu.int/comm/enterprise/entrepreneurship/support_measures/transfer_business/index.htm

European Commission, 2003


http://europa.eu.int/comm/enterprise/entrepreneurship/action_plan.htm

FBN International Monitoring (2007).


KPMG (2008), Risques et opportunités de la transmission des entreprises industrielles, Rapport final pour le ministère de l’Économie, des Finances et de l’Emploi, janvier.


Small Business Act (2008)


## Appendix 1

### Portals and Websites

- [http://www.apce.com](http://www.apce.com)
- [http://www.reprise-entreprise.com](http://www.reprise-entreprise.com)
- [http://www.bnoa.net](http://www.bnoa.net)
- [http://www.cessionpme.com](http://www.cessionpme.com)
- [http://www.fusaqc.com](http://www.fusaqc.com)
- [http://www.reprendre-bretagne.fr/Accueil](http://www.reprendre-bretagne.fr/Accueil)
- [http://www.transcommerce.com](http://www.transcommerce.com)
- [http://www.transmission.cci.fr/sites/transmission](http://www.transmission.cci.fr/sites/transmission)
- [http://www.reprise-entreprise.fr](http://www.reprise-entreprise.fr)
- [http://wwwTransmission-entreprise.fr](http://wwwTransmission-entreprise.fr)
- [http://www.actinbusiness.com](http://www.actinbusiness.com)
- [http://www.infogreffe.fr](http://www.infogreffe.fr)
- [http://www.netpme.fr](http://www.netpme.fr)
- [http://www.documents.fr](http://www.documents.fr)
- [http://pme.service-public.fr](http://pme.service-public.fr)
- [http://www.inpi.fr](http://www.inpi.fr)
- [http://www.fusaqc.com/fr/reprise_entreprise.html](http://www.fusaqc.com/fr/reprise_entreprise.html)
- [http://www.cession-commerce.com](http://www.cession-commerce.com)
- [http://www.intercessio.fr](http://www.intercessio.fr)
- [http://www.epb.com](http://www.epb.com)
- [http://www.lentreprise.com](http://www.lentreprise.com)
- [http://www.enviedentreprendre.com](http://www.enviedentreprendre.com)
- [http://jentreprends-et-jaim-eca.typepad.com](http://jentreprends-et-jaim-eca.typepad.com)
- [http://www.viadeo.com/hubs/130](http://www.viadeo.com/hubs/130)
- [http://blog.caravenedesentrepreneurs.com](http://blog.caravenedesentrepreneurs.com)
- [http://www.jerepends.com](http://www.jerepends.com)
- [http://blog.apce.com/destallissement/menterprise.blogspot.com](http://blog.apce.com/destallissement/menterprise.blogspot.com)
- [http://blog.apce.com/accoindex.html](http://blog.apce.com/accoindex.html)
- [http://amiensrepreneurs.herberg-pforum.net](http://amiensrepreneurs.herberg-pforum.net)

### Blogs and Forum

- [http://www.enviedentreprendre.com](http://www.enviedentreprendre.com)
- [http://jentreprends-et-jaim-eca.typepad.com](http://jentreprends-et-jaim-eca.typepad.com)
- [http://www.viadeo.com/hubs/130](http://www.viadeo.com/hubs/130)
- [http://blog.caravenedesentrepreneurs.com](http://blog.caravenedesentrepreneurs.com)
- [http://jentreprends.com](http://jentreprends.com)
- [http://blog.apce.com/destallissement/menterprise.blogspot.com](http://blog.apce.com/destallissement/menterprise.blogspot.com)
## Appendix 2: Cross Tables and Chi-Square Independence Test

### A- Web domain (Origin of sector: OS)

<table>
<thead>
<tr>
<th>Web domain (WD)</th>
<th>Web site</th>
<th>Frequency</th>
<th>Public sector</th>
<th>Private sector</th>
<th>Total</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>% in WD for X2</td>
<td>32.7%</td>
<td>67.3%</td>
<td>100.0%</td>
<td>Chi square = 5,784&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% in OS</td>
<td>32.7%</td>
<td>54.4%</td>
<td>44.7%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% total</td>
<td>14.6%</td>
<td>30.1%</td>
<td>44.7%</td>
<td></td>
</tr>
<tr>
<td>blog</td>
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<sup>a</sup> Theoretical frequency: 24.59.

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<sup>a</sup> Theoretical frequency: 14.31.

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<sup>a</sup> Theoretical frequency: 13.41.
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*Sig. = .000*


### E- Origin of sector (Cost to acquire information)

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*Chi square = 7.338*  
*Sig. = .007*

a. Theoretical frequency : 13.41.

### F- Cost to acquire information (Actor)

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*Chi square = 13.952*  
*Sig. = .000*

a. Theoretical frequency : 7.80
The Pete Suazo Business Center as a Model High Impact Minority Small Business Development and Resource Center

Business Case

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Abstract

Significant disparities in the rates of business ownership and operation persist between racial/ethnic minorities and their majority White counterparts in the U.S. In 2002, the total U.S. population consisted of 68.2% non-Hispanic Whites and 31.8% minorities. However, minorities owned only 18% of all the 23 million U.S. firms. Utah’s minority population of about 360,000 (15.5% of the state’s population) owned only 10,000 firms (or 5.3% of all firms in the state). This business case discusses the achievements and setbacks of The Pete Suazo Business Center, a minority small business center that was established to specifically address these disparities in Utah.

Presented at:
55th World Conference of the International Council for Small Business (ICSB)
Cincinnati, Ohio, USA, June 24-27, 2010
The Pete Suazo Business Center as a Model High Impact Minority Small Business Development and Resource Center

Gladys Gonzalez wanted to return a favor for the generosity that the late Senator Pete Suazo of the Utah State Senate had extended to her some ten years earlier. In the early 1990’s her start-up Spanish-language newspaper, Mundo Hispano, based in Sandy, Utah, United States was a financially struggling enterprise. Senator Suazo had helped her get a $10,000 loan to salvage her newspaper business (DMN Editorial, 2004; Mitchell, 2003). As a result, she had become a leading owner and publisher of a newspaper that targeted Utah’s Hispanic community that comprised of 11.2% of the state’s nearly 2.55 million people. To return the favor, Gonzalez established a business center in memory of Senator Suazo, to carry forward the Senator’s lifelong dream and efforts of “empowering minorities to become a part of the business community” in the United States (Bulkeley, 2004). In just about 10 years of establishment, the center had grown to become a leading resource center for Utah’s minority population. Gonzalez wanted to address the center’s challenges and expand it to the wider minority community in the United States.

Introduction

Ethnic minorities are groups that have shared unique cultural traditions and a heritage that persist across generations, and that differ from the majority population. Racial groups are determined by visible features, such as color and race. In many cases, race and ethnicity tend to overlap (Salazar, 2007). Distinct minority groups in the United States include Hispanics, Asian, African American, American Indian & Alaskan Natives, Native Hawaiian, and other groups. In addition, over recent years, various individuals have immigrated to the United States, creating a minority group of immigrants with unique characteristics such as language and culture. Because minority groups exhibit economic disparities as compared to the majority White ethnic group in the United States, factors that explain these disparities are worth investigating. This business case focuses on discussing
The Pete Suazo Business Center, a minority small business center that helps address the business ownership disparities in the state of Utah, United States.

**Minority Business Ownership in the United States**

Significant differences in the rates of business ownership and successful operation persist between racial and ethnic minorities and their majority counterparts in the United States. In 2002, the total U.S. population consisted of 68.2% non-Hispanic Whites and 31.8% minorities. However, minorities owned only nearly 18% of all the 23 million U.S. firms. Also, on average, for every dollar that White-owned firms made, Pacific Islander-owned firms made about 59 cents, Hispanic-, Native American-, and Asian-owned firms made 56 cents, and Black-owned enterprises made 43 cents (Lowrey, 2007). Also, the odds of minority groups opening businesses are 55% lower than those for the majority White population. In addition, female emerging entrepreneurs are less likely to start a business than males (Salazar, 2007). Thus, many minority groups tend to engage in the mainstream labor market rather than pursue business ownership.

Besides ethnic groups, the immigrant population is another minority group that contributes significantly to total U.S. business ownership, formation, and income, sales, and employment. In 2000, immigrants constituted 12.5% of the total population of U.S. business owners, generating a total business income of $67 billion (or 11.6% of all business income in the United States). Immigrants are nearly 30% more likely to start a business than are non-immigrants (Fairlie, 2008, November). For example, among self-employed Asians, 80.8% are immigrants, compared with 67.9% of Islanders and 56.8% of Hispanics (Lowrey, 2007). After noting this trend, many developed countries, including the United States, have created special visas and entry requirements in an attempt to attract immigrant entrepreneurs. Nonetheless, immigrants face barriers to the American society, such as low literacy levels, poor language ability, and cultural competence, which tend to impede their successful business operations. For example, although business owners from Mexico
constitute the largest share of immigrant business owners (255,300 business owners or 2.22% of all business owners), they have a rate of business ownership substantially below the national average (6.5% compared with 9.5%).

**Minority Business Ownership in Utah**

According to the 2000 Census, the United States had 1,436,410 immigrant business owners, representing 12.5% of all business owners in the nation. Utah had 4,546 immigrant business owners, representing 5.2% of all business owners in the state (Fairlie, 2008). In 2002, Utah had the 37th minority population, numbering about 360,000, or 15.5% of the state’s total population. However minorities owned nearly 10,000 firms, which accounted for only 5.3% of all the firms in the state. These firms generated $1.6 billion in gross receipts, or a mere 2.6% of the total gross receipts for the state. Although Hispanics, the largest minority group, accounted 9.7% of the state’s population, it owned 2.8% of all firms in the state, generating only 0.9% of the state’s total gross receipts. Except for Asians, other minority groups showed similar disparities. Asians accounted for 2.4% of the state’s population, owned 1.5% of all firms in the state, generated 1.1% of the state’s total gross receipts (MBDA, 2008). Despite the greater disparity between whites and minorities in the correlation between their population sizes and business ownership, minorities continue to contribute to the state’s economic growth. For example, in 2002, minority firms employed nearly 15,000 workers in the state. Also, the number of minority firms in Utah increased by 14% between 1997 and 2002, compared to 13% for all firms in the state (MBDA, 2008).

**Challenges Limiting Minority Business Ownership and Success in the United States**

Except for Asians, other minority groups in the United States generally have relatively lower business ownership and success rates as compared to Whites. Barriers and challenges that these minority groups generally encounter in their business operations include (Fairlie, 2005):
i). **Limited Assets:** Fewer assets including liquidity constraints generally limit business entry among minorities. Latinos and African Americans have substantially lower levels of assets than Whites, and hence they are less likely to become business owners.

ii). **Lack of Networks and Ethnic Enclaves:** Racial differences in access to business, social, and co-ethnic networks generally create racial disparities in business ownership among Latinos and African-Americans, as compared to Whites. These networks and ethnic enclaves may be especially important in providing financing, customers, technical assistance, role models, contracts, and information related to successfully running a business.

iii). **Discrimination:** Consumer and lending discrimination tend to discourage would minority entrepreneurs and reduce the longevity of their businesses. Consumer discrimination might occur in cases where predominantly White consumers have distaste for purchasing goods and services from minority-owned businesses, thus leading to lower profits and sales, fewer employees, and higher closure rates for minority firms. Lending discrimination occurs when minority-owned businesses experience higher loan denial probabilities and are charged higher interest rates by lending institutions, as compared to White-owned businesses with equal performance and creditworthiness. Consequently, some minority business owners are less likely to apply for business loans because they believed they would be denied.

iv). **Inadequate Human Capital:** Relatively low levels of education among some minorities are partly responsible for limited opportunities in entrepreneurship. For example, the 6.0% of the African-American/White gap in self-employment entry rates is explained by racial differences in education levels. 14.3% of African Americans are high school dropouts compared with only 6.2% of Whites. Also, a significantly high 53.1% of immigrant Latinos and 20.4% of native-born Latinos do not complete high school, which limit their entrepreneurial success.
v). **Intergenerational Progress and Family Business Capital:** The probability of self-employment is two to three times higher among the children of self-employed parents than among those for non-self-employed parents. Despite substantial gains in education, earnings, and civil rights made during the twentieth century, lack of African-American traditions in business enterprise is a major cause of low levels of African-American business ownership.

vi). **Language & Cultural Barriers:** Although also evident among ethnic minorities, these barriers tend to be more dominant barriers among immigrants to the United States. For example, immigrant business owners make up the largest share of the least educated business owners in the United States. Slightly more than 28% of all business owners with less than a high school degree are immigrants (Fairlie, 2008, November).

**The Pete Suazo Business Center**

The relatively smaller number and weaker performance of minority-owned businesses in the United States have become major concerns among policymakers. Federal, state, and local governments have set up programs to support entrepreneurship among minorities, women, and other disadvantaged groups, in order to enable families to leave the welfare and unemployment insurance rolls (Fairlie, 2005). Some of these programs include loans, grants, technical support offered through Service Corps of Retired Executives (SCORE) and Small-Business Development Centers (SBDCs), and government contracts to minority-owned businesses. Despite being well-funded, these programs remain ineffective in fully and effectively reaching minorities. In the light of evident barriers to minority-owned business and accompanying disparities in business ownership and success among minority groups as compared to among Whites, policies promoting minority entrepreneurship need to be creative to directly confront these prevalent barriers and effectively reach these underserved minorities. The Pete Suazo Business Center located in Salt Lake City, Utah is a private nonprofit Small-Business Development Center that creatively addresses the unique challenges faced by
minority business owners. Although the center primarily serves the Hispanic community in Utah, its services are open to other minorities and disadvantaged entrepreneurs. The center is named after the late Pete Suazo, the first Latino senator in Utah’s Senate.

**Senator Pete Suazo**

Pete Suazo was born in Salt Lake City, Utah on June 4, 1951. He graduated from West High School in Salt Lake City in 1969. He received a Bachelor’s degree in Criminology/Corrections in 1973 and a Master's degree in Human Resource Management & Economics in 1978, both from the University of Utah. Suazo had enough resources to move out of his poor neighborhood on the west side of Salt Lake City, but he committed himself to staying in his community to improve it, and ensure that the concerns of its residents were not overlooked in the public process. After working with a number of community-based non-profit organizations, he became the Administrative Assistant to Salt Lake City Mayor, Palmer DePaulis. In 1992, he was elected to the Utah House of Representatives, and in 1996 to the Utah Senate (Dmitrich, 2001; DMN Editorial, 2004).

Senator Suazo was a ceaseless advocate for civil rights and social justice. He worked to bring about social change in many ways. Through political advocacy, he worked to enact or change laws aimed at attacking the dynamics of race, class, and gender that kept people in the state from living the American dream. His other initiatives included painting homes for senior citizens, anti-graffiti campaigns, youth gang prevention centers, and Neighborhood and Mobile Watch (Rosario 2008). Suazo fought for the rights of minority entrepreneurs to qualify for business capital from financial lending institutions. Language, cultural barriers, lack of experience in establishing banking relationships, and relatively short-term credit histories had barred many promising minority business owners from qualifying for funding from Utah banks (Oberbeck, 1994). To recognize his efforts and achievements, Suazo received several meritorious community service awards, including Youth
Service Award (1992), for his involvement in the Salt Lake Area Gang Project; and Human & Civil Rights Award (1999), from Utah Education Association (Rosario 2008).

In August of 2001, Senator Suazo died in a tragic all-terrain vehicle accident while hunting in Sanpete County. His wife, Alicia Suazo, was asked by delegates at the Utah Democratic convention to finish his term in office. This case discusses mission, goals, objectives, and strategies of the Pete Suazo Business Center, which was established in 2002 to carry on Suazo’s dream of “empowering minorities to become part of mainstream American society.” The center focuses on assisting underserved minorities in Utah.

**Hispanics and Other Minorities in Utah**

According to the 2006 U.S. Census Bureau data, Utah had a total population of over 2.55 million, and included Hispanics (11.2%), Asians (2%), Native Indian and Alaska Native (1.3%), Blacks (1%), Pacific Islanders (0.8%), and others (1.5%) (U.S.C.B., 2008). Thus, Hispanics remain the dominant minority group in Utah. Hispanic persons are of Spanish origin or descent, who designate themselves as being Mexican American, Chicano, Puerto Rican, Cuban, or of other Spanish/Hispanic origin, regardless of race.

Utah’s Hispanics have satisfied their need to belong by maintaining their cultural heritage through the use of Spanish, special foods, festivals, and interactive art (music and dance). Social support systems have included churches, social organizations, and mutual aid societies (Gallenstein, 1998). Nonetheless, these practices have somehow alienated Hispanics from the predominantly English Utah society. Although the value system and culture that the majority of Hispanics maintain have resulted in a strong work ethic and family support system, the Hispanic population has experienced bias and discrimination in schools and the wider community. They have been offered the lowest paying secondary work positions, often because of their low educational levels. Many Hispanic and other immigrants to Utah usually face problems that include low wages, poor quality
housing, inadequate health care, racism, language and cultural barriers, profiling from law enforcement authorities, adverse media reporting, and other basic human rights concerns (Gonzalez, 2008). Despite these challenges and barriers, the future for the Hispanics of Utah is one of growth. From 1990 to 2005, Utah’s Hispanic population grew by nearly 200%, more than twice the national rate. In 2007, Hispanics made up about 11% of Utah’s population and 57% of the state’s foreign-born immigrants. The buying power of Utah’s Hispanics was $2.5 billion in 2000, and is expected to grow to about $6.5 billion in 2010 (NACORP, 2008). The Pete Suazo Business Center exists to assist Hispanics and these minorities to achieve full participation in the social fabric of the state and nation.

The Pete Suazo Business Center

The Pete Suazo Business Center was established to help strengthen and develop Hispanic and other minority businesses in Utah, with the goal of raising these communities’ living standards and enhancing their quality of life (Marriott School, 2008).

1. Background & Operations Information

a). History

At the time of its finding by Glady’s Gonzalez, the center’s original location was at 625 W. Girard St. (540 North), on the poor west side of Salt Lake City (Mitchell, 2004). To extend its services and help more clients, the center constructed and relocated to a larger facility building near 900 West and 1700 South in Salt Lake City, in 2005. The new center is in the heart of a minority neighborhood, close to clients, many of whom speak Spanish and some English (Sanchez, 2005). The 4,200 square feet building has four start-up incubator offices for rent to new small business clients (with all services of a small office – copier, fax, and secretarial services), a large conference room for seminars and classes with a capacity of 80 people, a computer training classroom with 15 to
20 computers, two small mentoring/counseling offices, administrative offices for staff, and a kitchen area (Nii, 2005). Colored in bright stucco colors, rooted in Hispanic history and culture, the building has a parking lot and a reserved plot for future construction expansion (petesuazocenter.org, 2008).

b). Vision / Mission

The Pete Suazo Business Center exists with a two-pronged mission to serve Utah's Latino/Hispanic and other underserved populations. First, it provides education, training, mentoring, and counseling to minorities on how to start and run successful businesses in the United States. Secondly, it serves as an access point for resource and service organizations, private and public institutions, and other parties that wish to offer their services to the underserved communities in Utah (SCORE, 2007). Although the center's primary area of focus is Utah, the center provides help to clients wishing to establish or expand businesses throughout the United States. Also, while the center focuses on developing and empowering Latino/Hispanic and other underserved minority entrepreneurs, deserving whites are also welcome for assistance (petesuazocenter.org, 2008). The center's lasting vision and mission are to become a “place where all minority small-business owners can come to get the help and the resources they need to be successful, to create wealth for themselves and their families.” (Nii, 2005).

c). Culture and Structure

Just as Pete Suazo himself was adept at forming coalitions, the center thrives on the culture of partnership and coalition building to carry forward its mission. For example, it has a diverse and savvy board of directors who have abundant business knowledge, experience, and connections to the mainstream Utah community. Also, it has strong support from government and business leaders, local governmental and non-governmental agencies, as well as several local institutions of higher education. The center focuses on creating successful business leaders, rather than diverting to other
community-support initiatives. For example, some parties have urged the center to initiate English as a Second Language (ESL) classes, but the center has resisted, choosing to focus only on business development initiatives. Lastly, the Suazo center has a very conservative culture, in terms of its planning and spending. Unlike other organizations which initiate programs and raise funding to support them later, the Suazo Center does not implement any of its programs until it has enough funding to support it.

*d). Financial System, and Fundraising Sources and Methods*

The center relies heavily on donations and grants from corporations, institutions, and private donors. About 90% of the grants come from private entities, and the remaining from governmental agencies (Heyn, 2008). Donations are both in monetary or in kind. The new building at 950 W. 1700 South was constructed using a $500,000 federal grant from the U.S. Department of Housing and Urban Development, secured with the help of U.S. Senator Bob Bennett (R-Utah). Design and construction management work were done for free (Sanchez, 2005). In 2004 Zions Bank (one of Suazo center's key contributors) donated $75,000 over three years to the center (Bulkeley, 2004).

Also, from February to August 2005, the United Way of Salt Lake (UWSL) loaned its executive, Mark Haymond, to the Suazo Center to act as the center’s Development Director. During this period, Haymond raised funds to cover the center’s operating expenses, developed relationships with and secured donations from 30 major donors, and acquired a donation of more than $50,000 worth of office furnishings for the center’s new building (United Way, 2005). Besides making financial contributions, various parties have supported the center though other resources, such as providing volunteer mentors and counselors.
e). Human Resources

The Suazo center is run by a full-time executive director (currently Robert H. Heyn), one full-time administrator, one part-time secretary/receptionist, and four regular volunteers. In addition, it has several volunteers, including business professionals and students from local business schools, who assist it on regular and occasional basis. The center has a very strong board of directors, with some members who are CEOs, and prominent in the business community of Utah. The board helps the center set strategy and direction for its growth and operations, raise funds, and connect with the right contacts and resources in the mainstream community. Lastly, Zions Bank staffs at the Suazo center its full-time commercial loan officer and loan assistant to provide the center’s clients easy access to the borrowed business capital (Nii, 2003).

f). Organizational Strategies

To achieve its mission of improving the quality of life for minorities in Utah, the center employs strategies such as, entrepreneurial support, strategic partnership with existing community agencies and resources, reward and recognition for entrepreneurs, and advocacy for minority workers’ safety.

(i) Entrepreneurial Support

In general, the Suazo center assists its entrepreneurial clients through direct business management counseling, financial literacy, development of business plans, and acquisition of business loans from appropriate financial institutions. More specifically, the center helps clients understand the ramifications of running their own businesses by assisting them with initial feasibility discussions, conducting market research, preparing funding requests, and obtaining legal licenses and permits. The center accomplishes some of these tasks by providing group courses, seminars, and workshops – in business law, finances, accounting, taxes, marketing, management, and procuring
business financing (petesuazocenter.org, 2008). Currently, the center offers 17 seminar classes on business management, every month. Besides group sessions, the center conducts one-on-one mentoring and counseling sessions.

(ii) Strategic Partnership with Community Resources & Agencies

The center strategically partners with government representatives, the local business community, non-profit organizations, and institutions of higher learning that wish to serve minority communities, to ensure that their services effectively reach minority entrepreneurs (petesuazocenter.org, 2008). It helps its clients understand and access the numerous community resources that are available to them (Sanchez, 2005). Some of the center’s strategic partners include Utah Hispanic Chamber of Commerce, Small Business Administration, Utah Small Business Development Center (SBDC), SCORE (Service Corps of Retired Executives), Utah Microenterprise Loan Fund, University of Utah, Brigham Young University (Marriot School of Management), Westminster College, Utah Supplier Development Council (USDC), and United Way of Salt Lake. Through these partnerships, the Suazo center has successfully linked minority entrepreneurs to financial institutions that offer business loans and to resources such as counseling and consulting services from SCORE (a leading America’s counselor to small business) (SCORE, 2007).

(iii) Reward and Recognition for Entrepreneurs

The Suazo center seeks to reward and encourage entrepreneurs to achieve excellence in their operations. For example, in 2007, Pete Suazo Business Center and leading Hispanic chambers of commerce in Utah partnered with Zions Bank to honor promising Hispanic entrepreneurs in the state with Utah Hispanic Business Awards, for their contributions to the community and economy (Deseret News, 2007). The Center played a leading role in nominating the awards recipients. Categories for award recipients included: Hispanic Small Business of the Year (for growth and
expansion in sales or operations), Most Innovative Hispanic Small Business (for creativity in marketing and technology or product ingenuity), and Community Service Business Award (for contributions to the community). Eligible businesses had to be Utah-based, with majority Hispanic ownership. In addition, they had to have 100 or fewer employees, and had to be in good standing with legal obligations. Each of the winners received an advertisement package valued at $20,000 that included radio, newspaper, marketing, and consulting services.

(iv) Workplace Safety for Predominantly Multicultural Minority Employees

The Suazo center has joined the Coalition for Multicultural Workers’ Safety and Health’s, a coalition of organizations around the state, to raise awareness and facilitate solutions for minority workers’ safety. Language proficiency, cultural differences, and fear of termination or deportation affect the workplace safety for many immigrant workers in the United States. Most of these workers tend to be multicultural or non-English-speaking. National surveys show that foreign-born workers, who are predominantly Hispanic, are getting hurt and killed at work in disproportionate numbers. The fatality rate for Hispanics for 2004 was 25% higher than for non-Hispanics. In Utah, employers are hiring more foreign-born workers in industries prone to injuries (Nii, 2006). As a result, safety-training in job tasks remains a primary concern and challenge among multicultural workers.

Formed in 2005, the coalition’s other members include the Mexican Consulate, Workers Compensation Fund, the Department of Workforce Services, Utah Safety Council, Utah Labor Commission, among others (Nii, 2006). The coalition calls for and conducts ongoing workplace safety seminars, presentations, and conferences for businesses or companies with multicultural workers. In addition, it maintains a Web site that offers resources and information for interested parties to dialog on workplace safety issues. Lastly, the coalition hopes to make sure its issues are represented at the Legislature. The coalition has considerably succeeded in helping employers and
employees to become more informed, to learn about the responsibilities of each party, and utilize available resources, in order to reduce and prevent occupational hazards.

g). Impact / Results

By mid 2005, the center had helped create more than 25 new businesses in Utah, and conduct seminars for more than 900 clients (Nii, 2005). Since then, the center has seen major improvements. In the past four years, it has risen from a less known center with a single office and a computer to a well established agency in Utah’s mainstream community that is well known to donors, volunteer groups, media houses and minority communities. It has helped many existing Latino businesses, which are mainly in the service industry, grow to become larger, more efficient, and have more appeal beyond the self-employment small businesses units (Heyn, 2008). Also, it has helped entrepreneurs create dozens of new businesses and hundreds of new jobs, establish several economically self-sustaining and hopeful families, and contribute heavily to the state’s tax revenues and purchasing power (Heyn, 2008).

In addition, the Suazo center has significantly earned the trust of the Latino community. There is a lot of mistrust among the Latino community, in many of Utah’s institutions. Some institutions are perceived as agents of federal immigration authorities that seek after illegal immigrant Latinos to deport them. The Suazo center has worked hard over time to restore confidence among Latinos by strictly focusing on developing Latino businesses and helping them achieve significant growth and profitability. It has built tremendous grass-root work, working with local communities and their leaders, and helping entrepreneurs understanding the business markets that they are targeting. The Latino community now views the center as a “real Latino center” that is dedicated to assisting them.
**h). Current Dilemmas**

Despite the center’s optimistic growth and achievements, it faces the dilemma of its overwhelmingly increasing clientele size, and the accompanying demand for its services. In 1998, there were 4000 Latino businesses in Utah. In just 10 years, this number has increased to 9000, with about 90% of these businesses located on the Wasatch front of the state. With Latino population growing at a faster rate in Utah, the trend of business growth is projected to grow at a much faster rate. Other minority communities in the state are experiencing similar growth in size and business need. To extensively assist these clients, the center is planning to build an office in Provo and Ogden areas. It is already conducting classes and seminars in Provo area (Heyn, 2008). Nonetheless, given the center’s limited resources, it faces a great challenge to cater for this fast growing minority community.

The center’s current resources already seem to be overstrained, given that seminars and counseling sessions incorporate a large number of service hours that the center cannot adequately provide. Also, the client size and need is outgrowing the center’s existing space, creating a need for more classrooms and regular seminars. With Utah’s unemployment rate among minorities and Hispanics on the rise, and minority populations continuing to grow, the center has a greater challenge to meet this growing need (Marriott School, 2008).

**2. Challenge / Major Task Facing Suazo Center**

To fully support its programs, the center faces a great challenge of raising enough financial resources from the scarce sources available. The financing of non-governmental organizations (NGOs) is becoming more challenging, mostly because the number of NGOs has grown over recent years, and all these NGOs are targeting the same limited number of existing funding sources. Also, some donors are only supporting non-business initiatives such as youth education and child health,
rather than business support centers (Heyn, 2008). Thus, the center’s challenge is to find more donors who are willing to fund business development agencies.

In addition, the center faces a great challenge of fully reaching out to other culturally-complex and multi-lingual minority communities in the state. The center has a greater task of convincing these groups that “it’s not just for Hispanics and Latinos…but also for Asians, Tongans and black business owners” (Nii, 2003). To meet this task, the center plans to increase its space, offer business classes in several languages, provide training and fund-raising assistance, and foster international trade missions. Nevertheless, navigating though these communities’ unique cultural differences, language barriers, and literacy levels to create business growth, remains a unique challenge for the center.

3. Possible Action Plan for Suazo Center to Address its Challenges

To uniquely meet its financial need and reach the wider underserved community, the center has tried to strongly pursue its culture of coalition-building and partnerships with other parties. Already, the center is planning on partnering with other Utah’s small business development centers to effectively reach underserved communities. While these centers have enough resources, they don’t know how to reach minority populations (Heyn, 2008). Under this joint partnership, the Suazo center plans to provide service and minority out-reach efforts to these centers to ensure that the state’s existing resources, facilities, and services for underserved communities are optimally utilized. In a sense, the center doesn’t want to duplicate what's already available in the community. Rather, it wants to help the underserved community realize and access the available resources (Nii, 2005). To multiply its funding, the center should consider establishing pilot businesses to fund its programs, with capital coming from donors.
4. Strengthening the Suazo Center

To strengthen the Suazo center, the center has been trying to fully utilize technology in order to efficiently and effectively serve its rapidly increasing number of clients. For example, rather than using the manual filing system to store, access and retrieve client information, the center is planning to use a computerized intake software. Several other areas of technology use that could strengthen the center and increase its capacity include offering mentoring and training online classes to reach massive numbers of clients, and monitoring clients’ business metrics and progress using computer technology. This challenge comes with training employees, volunteers, and clients to be technology-savvy.

Also, the center is exploring strengthening its talent acquisition and management practices to acquire a committed and effective work and volunteer force that will help it to fully meet its clients’ needs. At the moment, recruiting employees and volunteers to work at the Center remains a challenge. It is difficult to find employees and volunteers who understand the unique challenges and opportunities of Utah’s minority communities, have the education and skills to become mentors or educators, possess language capabilities, and have great passion and willingness to work for a non-profit organization. This challenge comes with convincing academic institutions to train more social entrepreneurs rather than just for-profit entrepreneurs.

5. Actual Plans Implemented and Results

The center is implementing several initiatives as part of its growth plan. It has created an intake process to manage the intake of new clients. It is now designing an effective educational curriculum to gear its training activities toward the clients’ various business competence levels. In addition, the center is designing its strategic growth plan for the next five years. The growth plan includes expanding to meet the needs of the growing client size; hiring more employees and volunteers; and expanding its existing facility to create more space for classes, seminars, mentoring,
and counseling sessions. So far, Marriott School students have worked with the Suazo center to help it create a business plan, Web page, brochure, and an intake process. They have also consulted for some of the center’s clients (Marriott School, 2008). More projects remain to be implemented as the center plans for its future expansion.

Conclusion

Barriers to business entry and success for minority-owned businesses that are created by imperfect capital markets, discrimination, and lack of opportunities to acquire business human capital may impose a large efficiency loss in the overall U.S. economy. Furthermore, the potential benefits of promoting minority business ownership in terms of increasing minority employment should not be overlooked. In 1997 alone, there were 2.9 million minority-owned firms hiring 4.3 million employees in the United States. Estimates from the Congressional Budget Office (CBO) indicate that more than 40% of African-American and Latino employer firms hire at least 90% minority employees (Fairlie, 2005). The Pete Suazo Business Center remains a key partner to minority business owners in enabling them to achieve lasting success. Already, the center has made greater achievements among Utah’s minorities and greatly contributed to the overall state’s economy, despite its limited resources. The center hopes to remain committed to assisting immigrants to America achieve the American dream. Many immigrants come to the United States educated, with business background, and English fluency. However, they need help to understand rules, regulations, strategies, and best practices of doing business in the United States. As the center grows and expands, it will make entrepreneurship more attainable to a wide range of minorities and other underserved individuals. The center’s management hopes to divert from focusing on primarily providing assistance on running small businesses, to providing support to a wider range of larger businesses, including retail enterprises and professional services offices.
Bibliography


Innovation, Entrepreneurship and Governance: The Shanzhai Handset Business

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Abstract

The spread of the Shanzhai phenomenon across several Chinese industries has attracted considerable interest in policy and research circles in both China and abroad. It has also generated a variety of opinions on the modalities, ethics and capacity for innovation and entrepreneurship related to this phenomenon. Taking the Chinese mobile phone industry as an example, this paper investigates the technological background and the market conditions under which the Shanzhai Handsets emerged. Based on the specific analysis of the challenges of the Shanzhai Handset to regulatory (government) and governance (industry) issues, the authors propose a model of ‘innovation governance’ which could apply to the future of the manufacturing industry involved with Shanzhai Handsets.

The relationship between entrepreneurship, innovation and governance has been considered critical to the development of efficacious framework conditions and notions of an enterprise culture (Baumol, 1990, 2007; Acs, 2009; Estrin, 1998, 2006). Arguments pertaining to the absence of suitable governance structures especially in transition economies have been put forward to suggest the need for strong institutional structures to be in place to protect property rights. Such arguments have compared the ostensible benefits of sophisticated intellectual property rights and governance in western countries with those of various transition and newly industrialising nations often providing intellectual support to industry level concerns. This literature offers little by way of explanation of local modalities, the search of legitimacy and conditions of governance, especially the informal ones embedded in local and distributed networks. This paper attempts to throw new light on the subject by examining a novel phenomenon which allows for innovation to occur both at the margin of legitimacy and through a network-centric approach involving a range of players. Such an occurrence raises issues about new forms of organizational innovation in particular together with those of product and service innovation.

The authors examine organisational innovation in terms of governance issues. The paper identifies three mechanisms of governance: industry governance, firm level governance and government regulation, and examines the way in which these mechanisms influence or impact on the innovation process. The paper is divided into six parts: the first part introduces some conceptual and theoretical issues; the second part introduces the phenomenon and analyses the technical background and market conditions related to the products on offer; the third part provides an analysis of the challenges that Shanzhai Handset manufacturers face
together with the difficulties associated with its development; the fourth part examines the governance mechanisms of Shanzhai handsets; the fifth part is to discuss implication of the model of ‘innovation governance’ (IG) in the context of the increasingly-popular Shanzhai culture; and finally, the paper concludes with a discussion on the implications of the IG model for policy and innovation and entrepreneurship theory.

**Key words:** Shanzhai handsets, innovation governance, entrepreneurship

**Introduction**

From around 2005, a number of ‘Shanzhai Handsets’ which were not well known in the country appeared in China’s mobile telephone market. Handsets such as “NOKLA” (not the hand slip of NOKIA!), and “Samsang” (not wrong spelling!) began to find their way into the market place. Shanzhai Handsets are mainly characterized by their ability to imitate famous brand handsets, and even surpass them in aspects of appearances, functions, or price. Numerous small-scale electronic factories that produce those odd, brand handsets are referred to as Shanzhai Enterprises. These enterprises are identified as having no formal brands, operating without any formal marketing channels but offering products at low prices, generally being referred as ‘creative’ players. A report, entitled *Uncovering Secrets of Shanzhai Handset Market*, from 30 Minutes Economic Update of CCTV broadcast on June, 2008 indicated that according to incomplete statistics, the output of Shanzhai Handsets in 2007 had amounted to at least RMB 150 million Yuan, which nearly equaled the total output of handsets in China’s domestic markets.

**The Meaning of Shanzhai and Shanzhai Handsets**

In Chinese, ‘Shanzhai’ means villages, territories, and protective fences built in mountains. Historically, these were strongholds of warlords built in defiance of the feudal official, and outside the power and reach of government and officialdom. A feeling of independence and autonomy is associated with the word Shanzhai. In our times the so-called ‘Shanzhai Products’ are those which are regarded at best as imitation or improvised products, and, at worst, ‘fake’ or ‘knock-off’ versions of well known brand names in mainstream markets. Increasingly, however, they have been endowed with new brand images representing perhaps an act of ‘commercial defiance’ to the hegemony of established brand names in the mobile telephone business.

Shanzhai Handsets are one of the earliest Shanzhai products. The emergence of these handsets unleashed a strong shock wave to the market, leading domestic handset enterprises that used to occupy half the China’s handset market, such as Bird, TCL, Kejian, Panda, Amoi and others, to close down their operations. Bird Co., Ltd., which had a net profit of RMB 245 million Yuan in 2003, suffered a loss of 539 million Yuan in 2007. Similarly, Eastcom and Panda Co., Ltd. relinquished their hold in the market with considerable losses, while the restructured Kejian gave up handset manufacturing in 2007. At the beginning of 2008, Lenovo declared that it would sell its handset business at the price of 100 million Yuan to 4 investment institutions.

Handset experts and critics hold different opinions on Shanzhai handsets: some consider that the emergence of these handsets is the result of technical progress, heralding the trend of future technological development. Others believe that these handsets violate market rules, referring to the Shanzhai Handsets as “Shady Handsets”.

In addition to being popular in the domestic market, Shanzhai handsets are also sold in the Middle East, other parts of Asia and Africa. Sales levels in the European market also appear to be increasing. Even, some of the locally unknown Shanzai Handsets have become popular brands in India, in Eastern Europe, and in Africa. Shanzhai handsets have now spawned Shanzhai computers, Shanzhai costumes, Shanzhai Spring Festival Galas, Shanzhai’ films,
and other Shanzhai products” of various brands all across China. It has now become part of the phenomenon of popular culture.

In common with all popular phenomena, the handsets and the culture that it has generated have received a mixed response. Critics associate the Shanzhai phenomenon with plagiarism and the infringement of intellectual property rights. Some even consider Shanzhai’ to be an insult to or humiliation for China. In some countries such as Pakistan and India the need for handset IMEI certification shows that people have started to question the legitimacy of Shanzhai versions of different products. Others with perhaps an open mind regard the Shanzhai phenomenon as symptomatic or symbolic of the spirit of anti-monopoly and innovation. Varied views offer appropriate measures to deal with the phenomenon. Some think Shanzhai should be banned, others preach tolerance and the adoption of different sanctions or measures according to their application and use.

**Structure of the paper and methods**

The paper is divided into six parts: the first part considers some conceptual and theoretical issues of entrepreneurship, innovation and governance. The second part introduces the phenomenon and analyses the technical background and market conditions related to the products on offer. The third part provides an analysis of the challenges that Shanzhai handset manufacturers face together with the difficulties associated with its development, and the fourth part examines the governance mechanisms of Shanzhai handsets. Part five discusses the implication of the model of ‘innovation governance’ (IG) in the context of the increasingly-popular Shanzhai culture; and finally, in the sixth and conclusive part the authors discuss the implications of the IG model for policy and innovation and entrepreneurship theory.

The paper provides a broad macro level analysis of the Shanzhai handset industry and its location within the wider Shanzhai phenomenon. The purpose is to obtain a broad understanding of the rise of this phenomenon in a particular cultural context. This understanding is achieved through observation of the evolution of mobile telephone handsets in China, the network-centric approach adopted by different Shanzhai players, the odds and difficulties they face in competing with global brand names, and how they have organized themselves through multiple governance structures reflecting innovative approaches to organizational development. Most of this observation is carried out by way of secondary search methods involving the examination of industry and government generated data. The ‘threatened species’ environment in which Shanzhai manufacturers have sought both survival and ingenious adoption of innovation practice, makes it difficult to obtain primary data, although the authors are exploring this ground for further research on this subject.

**Part One: An Overview of Conceptual and Theoretical Issues**

For the purpose of this paper innovation takes the form of an introduction of a product in new markets (where brand names are not necessarily affordable), whether by way of an invention or by imitation, leading eventually to diffusion in the market (Schumpeter, 1934). We also consider innovation in terms of the organization of its production and distribution, the introduction of incremental benefits, and recognition in the market, which allows for the conceptual link between innovation and entrepreneurship. While innovation is regarded as the creation (production or initiation) of something new (Bozeman and Link, 1983), entrepreneurship is referred to as the perception of opportunity associated with the innovation, and the ability (organizational arrangements, learning and governance arrangements) to act on such perception (Link and Seigel, 2007, Acs and Audrestsch, 2007, Mitra, 2009).

Networks of operation and production offer new opportunities for firms to develop products and services (Hooh-Soi and Roberts, 2003). Networks often follow open innovation architectures (Chesbrough, 2003) and are augmented by end –user involvement (Von Hippel,
2005), generating even greater opportunities for sophisticated and dynamic forms of product development. They also open up possibilities for different types of transactional arrangements and their governance.

The emergence of Shanzhai handsets in the market has raised specific questions about the relationship between on the one hand innovation as a process which embraces imitation and notions of governance on the other. Innovation as imitation has long antecedents. Schumpeter (1961) argued that the “spell is broken” as soon as innovation is made with the first innovation drawing followers leading to successful imitation making the innovation familiar through a process of diffusion in the market. The diffusion process eventually wipes out the entrepreneurial profit till another innovation surfaces and renders the first innovation obsolete. This process of ‘creative destruction’ is at the heart of capitalism as far as Schumpeter was concerned. Following Schumpeter many arguments have been made about the specific function of imitation as innovation enabling a process of technological learning (Kim, 1997, Kim and Winter, 2000), facilitating economic growth (Segerstrom, 1991), and as a form of benchmarking (Massa and Testa, 2004). The growth of Asian economies from Japan to Korea to China and India has often been attributed to imitation-oriented innovation (Kim, 1991, Kim and Nelson 2000). Imitation’s darker side is reflected in the flourishing output of fake goods in the hidden economy or in so-called ‘black markets’ across the world challenging and disrupting the institutional and moderating role of patents and often the legitimate process of buying and selling goods and services in the open market. The seemingly unstoppable growth of the hidden economy has inevitably raised questions of trust, the value of intellectual property and governance at firm, institutional and governmental levels.

An examination of the relationship allows for the proper consideration of new product development in uncharted and sometimes inchoate markets where established routines and practices can be called into question. The paper puts forward the idea of ‘innovation governance’ with reference to three mechanisms of governance: industry governance, firm level governance and government regulation. It examines the way in which these mechanisms influence or impact on the innovation process, and finally points out general implication of innovation governance to the evolution of a Shanzhai culture.

The relationship between entrepreneurship, innovation and governance has been considered critical to the development of efficacious framework conditions and notions of an enterprise culture (Baumol, 2007; Acs and Audretsch, 2009). At the level of the firm Coase (1937) had examined firms and markets in terms of alternative modes of governance rather than in terms of a production or technological function. How a firm was governed depended on differences between various forms of transaction costs which they had to incur both within and outside the firm. Any consideration of such costs gave rise to issues of conflict, mutuality and order (Commons, 1932), and their management. Managing the ‘Commons triple’ (Foss, et al, 2000) necessitated adaptation to particular environments and the use of resources. According to Hayek (1945) adaptation is only possible spontaneously through markets while Barnard (1938) identified a more ‘conscious, deliberate and purposeful’ kind of adaptation which was dependent on co-operation between firms and possibly other stakeholders.

The extent to which there is incentive intensity, administrative controls and a legal rules regime helps to define the meaning and value of governance either at the level of the firm or in markets (Williamson, 1991). For governance to function effectively at both levels there is a need for ‘soft’ (values, mores, and norms of practice) and ‘hard’ institutions (government institutions, industry bodies and agencies). The mix of these institutions lay down certain boundaries of business activity.

In making new products and in competing with incumbent players, new firms incur various transaction costs which they choose to reduce through a variety of means. In most cases firms
seek legitimacy by working within the institutional boundaries referred to above. Networks of firms can help to reduce some of the transaction costs and offer tangible outcomes for any search for legitimacy. Networks of operations also call for alternative forms of governance at the level of industry and those of firms, especially when their operations reach across borders of different countries.

However, survival in uneven playing fields can tempt firms to transgress boundaries. Such transgression can lead to unproductive forms of entrepreneurship (Baumol, 2007) judged by normative standards set in dominant environments, such as in Western countries. Such standards are of course not exclusive to specific cultures. Most firms in varied cultural environments would uphold values of integrity, honesty and fair trade as they manifest themselves in the activities of the firm. How these values are monitored and governed will sometimes be subject to different structures of governance.

Arguments pertaining to the absence of suitable governance structures especially in transition economies have been put forward to suggest the need for strong institutional structures to be in place to protect property rights. Such arguments have compared the ostensible benefits of sophisticated intellectual property rights and governance in western countries with those of various transition and newly industrialising nations often providing intellectual support to industry level concerns.

This literature offers little by way of explanation of local modalities, the search of legitimacy and conditions of governance, especially the informal ones embedded in local and distributed networks. What happens when we are faced with phenomenon and innovation that occurs at the margin of legitimacy and involving a range of players? Such an occurrence raises issues about new forms of organizational innovation together with those of product and service innovation.

The study of the Shanzhai handset phenomenon offers us the opportunity of re-examining some of the theories of organizational innovation, governance and network, from the perspective of a specific but complex, social and cultural environment.

In this paper we make the connection between innovation and governance, developing a framework which examines typologies of innovation to understand the emergence of a phenomenon, and forms of governance which we believe are necessary to legitimize, support, control and generate incentives for the producers of the Shanzhai innovation phenomenon. We note the evolution of the Shanzhai phenomenon and track the process by which Shanzhai manufacturers select, retain, and vary their actions in order to survive and grow in a highly competitive market. Alongside this tracking exercise we examine how different forms of governance at three distinctive levels – the firm, the industry and the state – can help to create and augment entrepreneurial value creation. A graphical version of this approach is shown in the diagram below.
As Figure 1 shows, each type of innovation can be associated with a form of governance at a specific level. The early stage, imitative innovation process is linked to firm level governance, where firms seek to acquire legitimacy by learning through imitation. Thus, a form of learning enables the Shanzhai manufacturers to define their place in the market. As the manufacturers develop an enhanced capacity for innovation, through functional or incremental measures and then on to new technological know-how and network-centric organizational innovation, the complexity in the forms and levels of governance change. Each stage of development has a mix of moderating variables, tools and factors, including learning, open innovation platforms and networked-based activity which influences both the nature of the innovation process and the forms of governance that are best suited to the stage of development. In referring to stages of innovation or associated forms of governance, we note that they do not represent a linear movement from one stage to another, but in keeping with evolutionary dynamics, there is a complex connection within and between each of those stages of innovation and the forms of governance.

Part Two: The Technical Background and Market Conditions

The “Turn-key” Mode Adopted by MediaTek

Handset production depends on a production network. Bird, TCL, Kejian, Panda and other brand enterprises all have their own production networks, with the significant characteristic of these networks being mutualism. Prior to the emergence of Shanzhai Handsets, handset manufacturers were the core players in the manufacturing process.
They developed and integrated peripheral techniques such as handwriting, Bluetooth, imaging and other techniques to develop new handsets within 6 to 9 months.

**Fig. 2: The Manufacturing Mode with a Handset Manufacturer the center**

All manufacturing enterprises have, in fact, shaped a network structure, in which different enterprises undertake different tasks:

- to manufacture moulds;
- to design appearances; and
- to match functions.

With a handset manufacturer at the center of the network, different manufacturers in different fields are tightly connected with each other to form a network structure which has a relatively high density and intensity. The emergence of Shanzhai handsets did not affect the network characteristics of handset manufacturing. What has changed, however, is the structure of the networks.

**Evolving Networks**

In 2005, the MTK handset chip, produced by Taiwan chip manufacturer MediaTeck, integrated into one handset a main board and software which required completion by a wide range of people for more than one year. In the manufacturing network, critical components are supplied by MediaTeck, while the handset manufacturer designs handset casings, shapes and other components, around the critical chips. A new type of handset is produced within 3 months (as shown in Fig. 2).
Conversion of the manufacturing technique network has led to important changes in handset development, production and marketing. Comprehensive solutions to the “turn-key” mode launched by MediaTek, resulted in chips and operation software, even liquid crystal displays, cameras and other components being brought together using a “one stop shop” business model. For each Shanzhai enterprise at least two links in the handset manufacturing chain are removed: an application platform and various software. These two links are now integrated into the products produced by MediaTek and other chip manufacturers. As a result, the most critical components have been packed as a semi-finished product. A manufacturer needs only to purchase the semi-finished product, match it with a handset casing and a cell, and assemble the handset with a relatively simple flow of operations and at low cost. The core technique controlled by famous brand handsets now has become a common one facilitating the production of Shanzhai handsets. Consequently, handsets also can be produced by some small businesses and individuals.

Changes in the network structure are part of the network-centric organizational innovation process opening up opportunities for small firms and self-employed individuals in the mobile telephone market.

**The Technical Platform of Shanzhai Handsets**

The outstanding features of the production network of Shanzhai handsets are the MTK handset chips of MediaTek and comprehensive “turn-key” solutions which supply a common technical platform for all manufacturers. The creation of the technical platform indicates considerable progress along technological lines. With the platform, it is pointless for manufacturers to start at the very beginning of the manufacturing process. The common platform provides effective ways to manage the diversity of products on one production line.

The idea of using technical integration within a variable range of specific applications was generated by H Meyer and Alvin Lehnerd. They pointed out that the product platform is “a set of interfaces and subsystems which can form a common frame, through which a series of various products can be effectively improved and be produced”. As Figure 3 below shows manufacturers and users are connected by way of a public or open technical platform which is effectively an innovation tool box allowing for both to work together to achieve multiple uses through technology exchange and integration. Von Hippel (2005) refers to such models as end user innovation which also embraces ideas of open innovation (Chesbrough, 2003).
Innovation and Cost Reduction
The major function of the platform is to reduce manufacturing cost. The chip supplied by MediaTek is a highly-integrated, multimedia baseband chip solution, which includes a mode, a baseband chip, operation software, LED, camera head and other components that all can be solved “in one stop”, thereby, greatly reducing handset production links and cutting down development costs. The price of an MTK chip is 75% lower than that of Nokia and about half that of handsets produced by larger-scale factories. A brand handset with relatively simple functions can be sold at a price of more than 1,000 Yuan, while a Shanzhai handset with a large screen, bluetooth, imaging, camera, handwriting, TV functions, etc. can be sold at a price of just a few hundred Yuan. If a famous-brand handset is equipped with all the functions of the Shanzhai handset, the selling price of such a product is likely to at least 3000 Yuan. It is often quipped that a Shanzhai handset can be sold at “the price of a Chinese Cabbage”.

Innovation and Effective User-Friendly Functionality
Secondly, the platform enables innovation to be more effective in terms of what it offers to its users. Chips of MediaTek and “Turn-key” solutions are only semi-finished products for handsets. The diversified value-added solutions can be chosen for processing a handset to be a final product. For instance, the solution can generate a main board with many different shapes and this main board can be made into a handset with different external configurations. Handsets can take the forms of watches, cigarette boxes, and car moulds of BMW, Mercedes Benz, Porsche, and others! The technical platform built by MediaTek solved many technical difficulties related to the original value chain, making it easier for production to realize and adapt to specific users’ requirements. Once a user puts forward the requirements, he or she will obtain the customized handset with particular functions within 3 days. Some “Shanzhai Handsets” combine aesthetic originality with functions such as super-large screen, intelligence, a TV, double cameras, a multimedia player, and a simultaneous standby of double cards, all within one handset!. The array of functions that can be built into a handsets is of staggering proportions.

User-led Constant Innovation
Finally, the new technical platform allows for easy integration of users’ innovation. Some users have started to use handsets for more than just communication, as they regard the Shanzhai handset as an item for fashion and an expression of individual style. Users often
possess critical and essential understanding of the requirements of product performance and can play an important role in putting forward proposals on product refinements and innovation (Franke, Hippe 2003, 2006). It is the most discriminating consumer with the most sophisticated set of requirements who is likely to help boost the quality of a product and a service. Take the following Game handset for example. With an external connection handle, the handset needs only to be put on the handle and connected with it, making games directly controllable by the handle. This simple facility turns the handset into a complete gaming machine. Handsets resembling “transformers” are equipped with eight speakers.

**The Innovation Toolbox**

New types of Shanzhai handsets are launched constantly, as the result of users’ enthusiasm for participating in product innovation. Von Hippel (2003, 2005) considers that a manufacturer needs to be aware of the exact consumer requirements for new products in a hundred and one ways, and that traditional production methods makes it difficult to absorb rapid changes and modifications generated by users. Von Hippel (2003, 2006) advises that a manufacturer should give up traditional methods and suggests that the best way to adapt to user led change is to provide the latter with a “Toolbox for Innovation”, so that users can make their independent innovations in designated systems of particular products and services according to their interests. In this way, a preliminary design is created, following which the “embryo mould” evaluated by consumers. A series of improvements are made until the product is considered satisfactory by the user. Von Hippel’s research (2002, 2003, 2005) shows that the “Toolbox for Innovation” is more effective than the traditional method of production.

**Innovation and Multiple Users**

The public technical platform of handsets here has become the toolbox for users’ innovation, which enables communications between an innovative user and a manufacturer to become easier. At the very beginning, Shanzhai handsets just imitated appearances or functions of mainstream brands, offering their ‘copy cat’ products at a very low promotion price. The motivation of users, the integrated functions and the novel appearance of Shanzhai handsets have changed the way these handsets are made and how they have started to attract an increasing number of consumers. Variously models in the shape of racing cars, cigarettes, and watches, for example meet the vagaries of the fashion conscious young consumer, while Shanzhai handsets with “large screens”, “large keys”, traditional fashion and best fit design ideas, appeal to the older generation. Functionality is extended when the handsets are equipped with an LED light, helping farmers in villages for example to use it as a torch. The multi-functional product characteristics of the handset enable consumers with a low consumption ability (in terms of both access and cost) in China to be share in the new technological experience.

**Innovation and the Market Characteristics of Shanzhai Handsets**

The two segments of the Chinese telephony market include one in which low-end users just buy handsets with basic functions at the lowest price, while the second segment covers high-end users who buy expensive new model handsets with a wide range of functions and good-looking or customized appearances. The market entry for a new product always begins with high-end users; for example, the latest handsets are always used by merchant princes and tycoons as well as top government officials. Their adoption helps to popularize the products for common consumers over time. While the volume of sales increases during this process demand in market takes on an evolutionary path of development.
The emergence of Shanzhai handsets has upset the dynamics of the market to a certain degree. Low-end handsets are increasingly endowed with numerous specifications. Handwriting, a large liquid crystal screen, double speakers, double bluetooth, etc. have become part of a basic configuration. Shanzhai products have all the functions of a famous-brand handsets all at a far cheaper price than their branded counterparts. All functions being equal a normal manufacturer sells a handset for a minimum of 1000 Yuan while the corresponding Shanzhai handset is sold only at a price of few hundred Yuan. Consequently, the latter were firstly welcomed by low-income consumers, satisfying a lifestyle desire for a luxury product. The variety of offerings and the price also attracted the younger generation, as some young users even purchase several handsets with different functions for use in different environments.

Changes in consumer behaviour tend to impact on the psychology of a society to a certain extent. A typical secular society divides consumers into levels according to classes of brands which they use. Users of Shanzhai handsets appear to embody what the media in Taiwan refer to as the “Shanzhai Spirit” – the value of the free social spirit which is not afraid to lose one’s face, or to make low profits in order to meet the needs and requirements of all consumers. It generates a new spirit of innovation which allow producers and users to be part of a generation of change in society which does not forsake traditional notions of the welfare of the community (Li, et al, 2009) sand the minds of 1.3 billion consumers in mainland China.

**Part Three: Challenges and Difficulties: Innovation and Legitimacy**

Shanzhai handsets and other subsequent Shanzhai products imitate their mainstream famous-brand counterparts while offering them at a very low price. Some Shanzhai handsets even surpass the imitated products in appearance, functions and prices. This has led to the creation of a movement loosely referred to as the “Shanzhai Phenomenon”, by both its admirers and its detractors.

The first disputable focus concerns intellectual property rights. Professor Ge Jianxiong in Fudan University argues (2009) that most of “Shanzhai Products” are
Unauthorized goods, most of which are characterized by plagiarism, copycat activity and spoof; only a fraction present uniqueness that can stand out in the market place. Pointing to features of the “Shanzhai Culture” like plagiarism, imitation and fake products, he puts forwards the view that “we can’t tolerate it excessively”. Others point out that innovation was once the key-word to describe the “Shanzhai” spirit when the first products emerged in the market place. Still others refer to how Shanzhai producers are now increasingly “naked” in their ambition and how their products have deteriorated with the adoption of malicious forms of plagiarism. An investment expert Wang Ran states in his own blog article ‘Spread of Shanzhai Culture is a Disgraced Thing’ that a Shanzhai product is now synonymous with a counterfeit product, which will remind people of infringement of intellectual property rights, shady handwork workshops, inferior quality, and other crimes. New laws and business sanctions should be applied to the treatment of these products in the market instead of the current norm of tolerance by both institutions and the market. Such views suggest that attempts at legitimizing both Shanzhai products and the enterprises involved in the phenomenon should not be allowed to acquire any form of cognitive or socio-psychological legitimacy (Aldrich and Baker, 2004, Aldrich, 1999) necessary for any form of embedding in both the market and in society.

The Shanzhai handset also arouses controversy overseas. For example, a German magazine commented that the ‘Shanzhai’ is “infringing on intellectual property rights unscrupulously”.

Concerns and observations referred to above raises serious questions about the legitimacy and acceptance of new products, the production and development process, the methods of organization and business models. These questions tend to reflect popular notions of poor regulation and a leaky intellectual property rights infrastructure in China. Media and institutional campaigns in the Western world have been obsessed with these issues about China. However, not much attention has been given to the value of innovation by imitation or event to the ingenious methods and techniques adopted in newly industrialized countries to develop new products, experiment with organizational design that reflect certain social values of community involvement. When both sets of arguments are taken on board various economic arguments and business management models tend to get blurred. Is market equilibrium affected adversely by innovation through imitation? When is imitation a legitimate process of innovation and when does it acquire a sense of notoriety? If brand –based hegemony is punctured by smaller rivals is that bad for the industry and the market in which it operates? Must developing and new industrialized countries be dependent on products and services from developed nations being embedded in local markets before they can embark on their own innovation pathways? Can anything be learnt from the adaptive, entrepreneurial responses to technologies, production methods and organizational structures that emerge and evolve in developing countries?

The questions above reveal a complex and challenging economic environment in the global market place. They raise issues about transparency and competitiveness, regulation and governance which allow all players a level playing field without too many constraints being imposed by those first in the market. While random and unregulated markets affect operators in all environments (as the recent economic crisis has revealed in relation especially to financial service operators in the western world), there is a need to address issues of governance, regulatory frameworks and institutional structures which do not stifle innovation and opportunity creation. The following paragraphs deal with these issues in relation to Shanzhai handsets.
Regulating Shanzhai: Imitation and Infringement

Shanzhai handsets are often referred to “handsets leaning on brands”, as there appears to be a general suspicion of infringement of intellectual property rights. It is understood that once infringement is deemed an issue, governments should supervise the production and sale of such products strictly. China’s objective is to build an innovative country, adhering to an independent innovation trajectory. The government supports and encourages innovation, and protects intellectual property rights like patents, brands, and copyright as part of its economic development objective.

The determination of infringement needs certain principles and guidelines with the need to consider the scope and boundaries of legal protection. Infringement cannot be affirmed as long as imitation is not within the scope of legal protection for intellectual property rights like protected patents, trademarks, and brands. It is generally believed that except where there is an obvious demonstration of illegal activity such as in smuggling, illegitimate production, the operation of counterfeit products, assembly and renovating handsets, the majority of the products do not cross the legal boundary. It is hard to judge any notion or practice of infringement under current laws. At present, China has set up and perfected a series of intellectual property protection systems geared to international standards; yet it is undecided whether to stipulate new laws and regulations aimed at Shanzhai products.

Brands, Values and Society

A brand is a comprehensive reflection of internal quality and external characteristics of a product, it is a bridge for consumers and enterprises to communicate, and is also a promise of a product value. However, a brand cannot exist without a market; without a clear market issue the brand is a mirage. Shanzhai handsets offer economic, social and personal value to a wide range of consumers, which enables their producers to establish a broad market foundation. While imported branded products cater to a rising upper middle and rich consumer class, Shanzhai handsets have a mass appeal. While the brand producers are concerned with the vagaries of a select market place, their Shanzhai counterparts explore mass, social acceptance of products which open up opportunities for social mobility an personal consumption. These differences account for both their places in the market with selectivity being the driver for the foreign brands and mass market availability being the spur of the Shanzhai makers. If the approach of the latter engulfs the former’s position because of the nature of the consumer market place then that is an issue of competiveness at the level of firms.

Recent research evidence indicates that half of 1.3 billion Chinese (or 650 million Chinese) use mobile phones and that more than a quarter of these users are Shanzhai handset users. These users are referred to as “common or grassroots people”. The Shanzhai handset is, therefore “the handset of the common people” and “the handset of grassroots”. The main objective of public services is to provide the society with more and better public utilities and products. Therefore, the issue of public demand cannot be left out any consideration of legal and institutional matters.

Understanding the Value Chain

If the government is to supervise and block survival opportunities of Shanzhai handset producers it will have to deal with the complete industry chain that has been established around this phenomenon. MediaTek Handset’s shipment exceeds 200 million sets; making it the second largest handset chip company in the world. It has a market share of more than 70% of the mainland handset chip market. A manufacturer of a Shanzhai handset is essentially an integrator, who integrates all the end points on the handset chain such as a design firm, a handset test business, or a factory.
Depending on the functions of the chips supplied by MTK, the design firm’s work is like embroidery on silk products. The parameters of handsets are nearly the same for all standard products - a touch screen, a surround sound, MP3/MP4, a million-pixels camera. If a handset is more expensive, it will have additional functions including, for example, double-card standby, a digital television, and JAVA. With MTK rushing into the mainland handset market ahead of others, Taiwan’s industry supply chain is well established with manufacturers of quartz and wireless communication components, IC design, IC access, medium-small-sized panel, PCB, and LED. In the mainland, specialized factories produce liquid crystal screens, earphones, cells, chargers, walk pens, and even camera lens, dust screen, and other such “embroideries”. So a mature industry chain has already been formed. Statistics show that, in Shenzhen by 2007, there were nearly 140 handset manufacturers, 36 plan integration firms, 140 main board research and development enterprises, 50 appearance and structure design businesses, and 300 bluetooth manufacturers, all are integrated with the handset manufacturers. In addition, there were 3000 sales operators at all levels and 150 auxiliary transportation logistics enterprises (Xu Chao, et al 2007).

The financial crisis is a prompt for the development of strategies that expand domestic demand in China. A prevailing view among many consumers in China indicates that the quality of Shanzhai products is the same as those of foreign brand products. Intensifying Shanzhai’s national consumption can enable enterprises with good-quality products to have a larger domestic market, enabling Chinese firms and the national economy to tide over the financial crisis.

Shanzhai handsets’ challenges posed by market rules and government regulations can cause a plurality of economic and social issues. As for “Shanzhai”, can the government regulate it? Does it really need to regulate it?

**Part Four: Governance and Shanzhai**

China is the largest handset market in the world. Foreign brands in China include Motorola and Nokia while the famous domestic brands are, among others, Amoi, Bird, Lenovo, Konka, and TCL. Survey data issued by Internet Data Center at the first half of 2008 shows that foreign capital brand handsets account for 60% of the market share, while the market share of the Shanzhai handset is 23.1%. This suggests that home-made brand handsets are in a particularly awkward position in that that they are caught in a pincer type attack both foreign-brand and Shanzhai handsets. Most domestic brand handset firms show a heavy loss, save of them are resold and some have even withdrawn from the competition stage. Foreign brands such as Nokia and other manufacturers are also attempting to avoid the competitive pressures from Shanzhai handsets by moving into the laptop market.

The Shanzhai handset has become a “heckler” disrupt the stage occupied by famous-brand handset manufacturers. As a result of the financial crisis, the predominance of the Shanzhai handset is likely to be more obvious. The cost of a Shanzhai handset will be about 150 to 200 Yuan less than that of a famous-brand handset, and even though brand handset prices were reduced by 15%~20%, (compared with a Shanzhai handset) in 2007, it still has no price advantage. Shanzhai handset manufacturers reduce costs by saving technology monitoring fees, which tend to raise problems for governmental testing laboratories. These handsets have no relevant technical data prompting brand manufacturers to push government departments to impose strict measures for managing and regulating the Shanzhai rebels.

On December 18, 2008, the Industry and Information Department released a notice for a handset IMEI number registration, inspection and management policy. The
Telecommunication Terminal Test Technology Association under the IID was expected to inspect and issue IMEI identification numbers to domestic handset manufacturers. IMEI has been the unique identification number of a handset; and only with the IMEI, can a handset be used on GSM/UMTS network. Without a legal IMEI, a Shanzhai handset can just use a fake “ID” or many Shanzhai handsets can share one “ID”. As a result, in July, 2008, handsets exported to Pakistan were locked, resulting in the interruption of communication of a few hundred Chinese Shanzhai handset users. If the administration department and operators run strict surveillance tests, Shanzhai handsets will just have two alternatives: one is to formally apply for a corresponding IMEI number; the other is to purchase a lawful IMEI number.

Professor Han Kaili, who supports Shanzhai handset marketing, questions the legitimacy of the way a handset gains access to the network via a handset number rather than an IMEI number. The Shanzhai handset belongs to a legal business operation. Before the introduction of IMEI number registration, the market had more than 600 million handset users. This calls into question the feasibility of the measure introduced. Since the handsets purchased in the past can still be used today, it would be difficult to distinguish a handset produced “before” the IMEI number policy is introduced from one produced “after” that event. Even if every handset needs an IMEI identification number, it is not too difficult a problem to provide a decoding service for users.

The challenge is, therefore, to choose between putting an administration system in place or to allowing market mechanisms to solve difficulties and challenges posed by Shanzhai handsets.

**Difficulties facing the “Shanzhai” manufacturers: Brands and Imitation**

The Shanzhai handset manufactures have no stable brands and lack formal marketing channels, so it primarily chooses to produce the handsets by copying others brands. Mere imitation in the long run is not sustainable and this reality poses difficulties for Shanzhai handset manufacturers.

Competition in the current international market has passed the stage of product competition and moved into an era of brand competition. Chairman Woodruff of Coca-Cola telling remark that all large banks would rush to provide loans to Coca Cola in the event of a fire destroying the company, is indicative of the importance of brands. In outwitting brand players of mobile telephones, Shanzhai handset manufacturers can be a victim of their own success.

Intellectual property rights are embedded in brands, trademarks, patents, and technical know-how. While building up a tangible product, an enterprise should also operate its own intangible assets or knowledge assets. The operation of its material assets goes hand in hand with its knowledge assets. By leaning on the brands of others Shanzhai manufacturers can acquire certain material benefits but they cannot develop a brand. Copying and imitating enables a Shanzhai handset manufacturer to produce a duplicate of an “original edition”; and make money in the process of selling only the duplicate. This process does not allow manufacturers to build up their own brands. Rather, and in effect, they are publicizing the brands which they have copied. If Shanzhai handset manufacturers want to overcome this brand deficit it is not sufficient for them to remain in the shadow world of imitation.

**Product Development**

The other difficulty for Shanzhai manufacturers is the absence of product maintenance and after-sale service together with quality assurance. From the design of a handset and the supply of raw material to the production and assembly of all links, the
Shanzhai product is dependent on the division of labour and functions of and the links in the industry value chain – the search for chips, software solutions, die sinking, production and marketing. Popular handsets incorporate the functions of MP3s, digital cameras, radio and digital videos, and in some handsets other functions such mobile TV and GPS navigation can be found too. Unless Shanzhai manufacturers leave out other important links such as research, design, and technical testing, which all famous-brand handset producers value, and unless they reach agreements with manufacturers of integrated chips, GPS, and molds and other functions, it would be difficult to reduce costs and to put products on the markets quickly. The paucity of technical data based on industry specifications makes it rather difficult for the handset to be tested. Coupled with the lack of maintenance and after-sale service the Shanzhai manufacture can face serious problems.

Complaints received by Consumption Association are about “terminals” in mobile communications. The majority of these complaints are about Shanzhai handsets. In many people’s minds, “Shanzhai” has begun to be associated with unoriginal and even fake products, which have “not been tested in the sun”. Even among those more tolerant of Shanzhai products, there appears to be a reluctance to purchase new Shanzhai products. This negative perception is a far cry from the views linked to the ideas of free spirit, suggesting a waning of the rebel Shanzhai!

**Part Five: The Innovation Governance Mechanisms**

The Shanzhai phenomenon appears to face twin challenges – one for institutions and competitors in terms of the legitimacy of the products, and the other for the Shanzhai manufacturers themselves as they encounter their own problems of development. It is clear that imprudent legislation which seeks to curtail or remove Shanzhai products from the market would perhaps be impossible to achieve in practice. In some places, the Shanzhai handset market has gone partly underground. Even then the products continue to generate interest. Given that markets, institutions and the Shanzhai producers all face specific problems, concerted action by all three parties, industry, government and Shanzhai firms – need to be encouraged. Such action in itself can be regarded a innovative as it calls for the development of new forms of governance that can best realize the productive value of entrepreneurship and innovation.

**Forms of governance**

Three means of governance could be considered - industry governance, government governance and enterprise governance.

**Industry governance: Disrupting and gaming**

The turbulence in the mobile telephone handset market caused by Shanzhai handsets could be regarded as a typical case of disruptive innovation studied by Clayton Christensen. Christensen (1997) discovers that “disruptive innovation” affects many leading businesses which often tend to lose their leading position when major technological or market change occurs. These changes provide opportunities for new incubents. Christensen differentiates the two types of disruption: one is new-market disruption and the other is low-end disruption.

The popularity of Shanzhai handset should be attributed to the practice of low-end disruptive innovation. The so-called low-end disruptive innovation means saving cost first, by unceasingly digging up customers’ basic requirements, analyzing the non-basic requirements in products and services, so as to reduce costs and to expand outputs, and finally realizing small profits and a large volume of sales. Shanzhai handsets take the ‘low-end’ route way and even though they never advertise, their popularity fizzes across a wide community of users.
The process of low-end disruption is in fact a game. The Shanzhai handset can be seen as an intruder while the incumbent is a “temple”. For disruptions caused by “Shanzhai”, the temple may have no way to deal with it, temporarily or in the long run. When the incumbent becomes aware of the damages to its position from the intruder and plans to fight back, it is already too late. The rigid organisational arrangements of the incumbent caused by their internal cultures, values, and processes (typical of large firms), offer no solutions to the problems of rapid and disruptive changes of technologies and the market. Disruptiveness drive the failure of often efficient but rigid organizations.

The occurrence of disruptive innovation does, however, follow a process resembling the game process between the “Shanzhai” and the “Temple”. One of the frequently-used strategies in a game pattern is to obtain help from the third party. In the game process, one of the coping strategies used by “temple” is that of “crashing”. The other strategy is to borrow “identification numbers” or “industry rules” and to take administrative means. The former strategy just means a kind of “technical error” for the Shanzhai handset, which can be dealt with by technical means. The effect of the latter strategy is to push Shanzhai to a corner through the introduction of measures by the third party. The use of the IMEI measure is a good example.

Perhaps the most important strategy for the “temple” is to adjust its own act and to “reply in kind”. For example, Nokia has started to make use of its own advantages of scale and scope to move into the low-end handset market; a handset type at the price of 500 Yuan or so has functions equaling those of the home-made handset after careful research of products such as the Tianyu Langtong which is honored as the “Shanhai King”.

Dynamic Strategic Change

Firms in nearly all newly-developing industries, particularly high-tech and monopolized industry, have depended on high profit margins for a long time. The business models of these “temples” of fortune have ignored the ordinary or common user and consumer who do not play any part in the making of these profits. Their early entry in emerging markets have been characterized by the continuation of the production marketing and selling of products in the same vein as they have done in developed economies. The emerging of Shanzhai, has disrupted the complacency of the “temples”. Their overspreading advertisements do not work, their research and development teams to be at a loss to understand the consumption requirements of common people, and extravagant profits appear to be eroding with time.

In effect there are two related battlefields, one in China, where Shanzhai handsets are disrupting mainstream market, and the other is in the international market, where mainstream international manufacturers facing low-end disruptions generated by the handset chips of MediaTek. If we estimate the handset requirements all over the world to be 1 billion for one year, the handset chip output of MTK in 2006 accounted for 5% of that global market, rising to between 13% to 15% in 2007(150 million chips), and reaching 220 million in 2008. 250 million handset chips are expected to be produced in 2009. MTK is second largest handset chip supplier after Qualcomm. No wonder experts are talking about the future of handsets belonging to either a “Qualcomm Era” or an “MTK Era”!

From the third quarter of 2007, handset chip shipment of MTK has exceeded that of Freescale which ranked second in the world. In addition, the global financial crisis has had negative impacts on the market, so handset chip giants such as Texas Instruments, Freescale, and others etc. are facing the dilemma of either to sell their handset chip business or to allow these units to continue operating independently. A batch of patriarch-level handset baseband chips manufacturers, including, Texas Instruments, Freescale, Agere, ADI, and NXP, have stepped out of the historic stage gradually, and only three of the first-team handset chip
manufacturers are now left to compete in the market place – Qualcomm, MTK and ST-NXP-EMP (ST-NXP-EMP is a joint venture, which focuses mainly on European and American handset manufacturers). The global handset sales volume is approximately 1.2 billion, of which MTK’s share accounted for 12.5%, (see the rise in the position of MTK’s competitiveness from Fig. 6 (steady growth status of the operating income of MTK).

Figure 6: Operating Income Variation Chart of MTK

Operating income (New Taiwan Currency/ 100 million)

The games between the “Shanzhai” and “Temple” both at home and abroad continue unabated. China Mobile Telecommunication’s entry into a “3G” era, has intensified the game among WCDMA, CDMA2000 and TD—SCDMA, making it complex and as it moves into a new stage. China Telecom started to conduct CDMA-EVDO service test partially at selected places on March 16, 2009, while China Unicom also decided to bring forward 3G mobile phone number distribution to April 15, 2009, in four cities – Shijiazhuang, Baoding, Tangshan and Qinhuangdao. The regular handsets cannot enter the market before a network entrance certificate is acquired. Acquisition of the network entrance certificate needs at least 2 months. Starting a war on the 3G handset in advance gives rise to a lack for 3G handsets, which seemingly offers an opportunity for the Shanzhai handset to enter the market with their characteristic speed and networked-worked flexibility of operations.

Qualcomm, the joint venture ST-Ericsson, Broadcomm and other chip tycoons are monopolizing WCDMA chip market. Even though on the 2008 Beijing International Communication exhibition, MTK showed off its WCDMA/EDGE baseband chip MT6268, claimed that the chip had passed IOT tests carried out by well known international operators, and sent chip samples to some handset manufacturers, it is still not certain whether the handset with a MTK chip can swing the WCDMA terminal bidding initiated by China Unicom in the immediate future.

Intense competition among operators of China Unicom prompts them to take the mode of customizing handsets when promoting 3G business. They will form a powerful “third party” which can help the “temple” to fight against the Shanzhai under these new circumstances. On March 17, 2009, Forbes revealed that the US subsidiary of ZIE Corporation was attempting to build up partnership with large-scale operators like Sprint, Verizon Wireless, AT&T, etc. so as to increase its market share. Evidence shows that the mode of a consumer purchases a handset, and then choosing a network is being replaced by a new mode of an operator of China Mobile
bundling a network with a handset, and offering a handset for free “at the expense of netting in”. International handset corporates are launching their own on-line software shops in the hope of strengthening the user’s stickiness to smart handset products through more software applications, and enabling a win-win arrangement by cooperating with operators.

In such a case, the Shanzhai position of Shanzhai handsets does not change. Instead, it acquires a different profile. Since related products do not go through the national certification test, and the business and financial operations are irregular at the best of times, the Shanzhai handset is unable to be part of an operator’s 3G handset large scale customization and batch procurement programmes. Even if a certain number of Shanzhai 3G handsets appear in the market they just can realize some primary functions such as high-speed web-surfing and video call. The core advantage of a 3G network system including the supply of high-speed data business, and all videos, media, web-searching can be compromised due to lack of support from official channels. In the long run, the success of hand-hold equipments depends instead of software. The new mode of making profits raises a higher requirement for a research regime for handset enterprises. The dependence on handset terminal manufacturing, on solutions provided by MTK, without technical knowledge accumulation and independent research activity, can pose serious problems for China’s Shanzhai manufacturers.

**Internal Governance: Firm-Level Self-governance and “Becoming Regular”**

Suspicious about the infringement of exclusive rights of trademarks of famous-brand handsets, have led various regional industry and commerce to investigate Shanzhai manufacturers. The Bureau of Industry and Commerce in Xinjiang Uygur Autonomous Region has organized four investigative actions since October, 2007, confiscating 20,000 faked and counterfeit handsets in the process. One hundred and sixty eight brands are involved in these products. Shenzhen, the “base camp” of the Shanzhai handset, has been exposed several times by CCTV. Local executive departments investigate the entire electronic market within a district, cracking down severely on faked and counterfeit Shanzhai handsets from one factory to another. Other trade and commerce organizations in Zhejiang Province, Shanxi Province, Shijiazhuang of Hebei Province, and Suzhou of Jiangsu Province, also organize similar executive investigative actions aimed at the Shanzhai handset manufacturers.

Despite the cleaning-up process the Shanzhai handset continues to prosper in the open market. Shanzhai, now has its own code of conduct and discipline resorting to internal governance measures in common with good network systems. Self-interest has begun to restrict high-imitation handsets from infringing on others exclusive trademarks, such actions being regarded as being harmful to consumers’ lawful rights and interests and to the image of the industry. Many manufacturers and distributors of the Shanzhai handset also regard high-imitation handsets as “individuals who bring disgrace to their groups”, so they take positive attitudes towards closing down the faked and counterfeit Shanzhai handset manufacturers. An ‘e-pal’ named “super-moderator” leaves a message on a forum: “we insiders also agree that faked Shanzhai handset should be cracked down. High-imitation handset is always sold by purchasing casings for assembly without any technical contents. From this point, the media’s exposure is a good thing. So only by developing businesses together without variation, we just can go further; having our own brands is inevitably the trend of the future.”

Many Shanzhai handsets do not borrow trademarks of famous-brand handsets. They are called “Shanzhai products” because they do not go through the net-entry test. Referred to as the “regular” Shanzhai handsets, their manufacturers hope to distinguish themselves from other “irregular” ones, and to set up their own autonomous associations. In December, 2007, a Shanzhai “alliance card” was shown on line in preparation for the China’s Shanzhai Association. In the draft regulations of the “China Shanzhai Economic Innovation Association”, “Shanzhai” is redefined as “high-imitation, creation, innovation and production”. The Association required that members should “not have records of
manufacturing and selling faked or inferior goods, or of infringement of intellectual property rights like trademarks, patents, copyrights, etc.”, demonstrating that the Shanzhai manufacturers have developed their own self-regulating environment. The establishment of the Shanzhai Association can help to specify and restrict illegality and infringement of IPR. It can also help with the absorption of technology and originality in a legally constituted environment, which in turn should allow for the faster and more stable growth of Shanzhai.

Inside of Shanzhai other changes are taking place. One of the motives is competition among Shanzhai handsets” when disrupting and occupying part of the field of foreign-and home handset brands. The other motive stems from pressure of brand “temples”. Before 2007, there were more than 2000 enterprises involved in handset manufacturing in Shenzhen. As a result of low-level and homogenized competition among a great number of manufacturers, oversupply, severely overstocked products, and the continual clearance of goods with reduced profit margins, and even the sale of goods at a price lower than cost became the norm. For some Shanzhai manufacturers maintaining their current operational status was more than struggle.

Competition comes not only from domestic market but also from global market. In overseas markets, price competition for the home-made Shanzhai handset had reached its nadir. Unless handset manufacturers run business without profits it was not possible consider any further price reductions. Since some of these handsets were manufactured without adequate quality control, handset distributors home and abroad created psychological obstacles due to their fear of being regarded as being dishonest by their customers because of the low quality of the products.

If competition means selecting the superior and eliminating the inferior, internal competition spurs Shanzhai to be stronger as a group. A survey shows that the market share of Shanzhai handsets has grown to 25% in China, and the exported Shanzhai handsets have even a higher share of the market. Diversified value innovation in low-end market rather than infringements of intellectual property rights or tax evasion, appears to be driving this growth. MTK provides Shanzhai enterprises with an open innovation platform. The solution purchased by Shanzhai enterprises from MTK is merely a circuit diagram. Although a number of main boards with different configurations can be drawn from the circuit diagram technology inputing is needed to complete the process. Most of research and development personnel are engineers who had worked in former domestic handset enterprises, and in firms such as Nokia, Motorola. Most auxiliary manufacturers in China are first-class operators.

In this scenario of intense competition, a batch of large-scale Shanzhai handset manufacturers is positively applying for registration of their brands in order to build their own “Shanzhai”. The existence of lots of Shanzhai brands suggests that Shanzhai handsets are moving from imitation to innovation, as they seek variation after retaining their specific technical and organizational skills in order to survive in the market. Here innovation takes the form of integration of functions. Shanzhai handset manufacturers are building up their own brands and stepping out of the arena steeped in “brand difficulties”.

If Shanzhai handsets want to overcome problems of quality assurance they would be expected to participate in the net-entry technology test and build up their own quality assurance, maintenance and after-sale service system. In the trade this process is described as “being married” or “being regular”, “Being married”, “being regular” and “accepting surrender” all mean that Shanzhai handset manufacturers hope to cast off their own image of imitative “Shanzhai”, and the values associated with that tradition.

The Chinese classical novel Water Margin describes the process of formation, development and evolution of “Shanzhai”. In the initial stage of formation of Shanzhai, a lot of greenwood
Baw cocks united in Shanzhai, confronting the feudal official, “enforcing justice on behalf of Heaven”. Then Shanzhai was just a “united hall”. Subsequently Shanzhai was converted into a “loyalism hall”, and the Baw cocks accepted “amnesty and surrender” to the then royal court. When the above story is applied into the situation of Shanzhai handsets, it means that Shanzhai manufacturers may insist on Shanzhai while seeking cooperation with regular manufacturers, or “accept amnesty and surrender” (accept to be purchased or merged), and even “adaptation” (accept others’ investment in them).

The morphing process is paradoxical in the sense that for the Shanzhai producer not surrendering is to die, while surrendering is to die quicker! It has proved difficult for many Shanzhai manufacturers to surrender to the IMEI registration process and survive. But why is surrendering the same as dying quicker? The Anycall story provides a clue. A handset imitating Anycall boasts of good quality and performance. The above handset is produced in a factory in Shenzhen. When the factory is discovered and visited by Anycall management, the visitor offers the Shanzhai producer an opportunity to manufacture handsets with the original brand Anycall. Much to everyone’s surprise the visitor’s offer is rejected. The reason for the refusal of the opportunity is because developing a famous-brand handset means high logistic costs and the production of large quantities. This in turn implies that the response to market will be slowed down and the cost advantages of imitative production will be lost. This story shows why regular handset manufacturers were unable to expand their business in the third or fourth market or even in rural markets. These markets were left the Shanzhai makers. “Shanzhai King” K-Touch which changed into a regular manufacturer in 2006 took the first place in the domestic handset market in 2007 relying on subcontracting for their production. In 2008, its much vaunted move into brand handset development led to an advertisement investment of more than 100 million. It gained brand premium together with increased cost, but realised retarded growth!

In becoming ‘regular’ manufacturers must accept formal certification from tests carried out by the Beijing Center of Handset Test Identification (CTI). “The Beijing CTI is merely like a freeway toll station, which is unable either to speed up or to assure safety. The only effect is letting you line up and pay more money,” says one e-pal named “Reasonable Analysis” on a “Network of the Shanzhai Handset”, “any innovation or expansion must have 17 or 18 official seals of license authority, which is the fatal reason for domestic handsets to resort to “high diving” after the glory of occupying half of the market.”

As operation risks become higher with official crack downs, and since the traditional channel is unwilling to sell the Shanzhai handset without a brand and after-sale service provision, a large number of operators are joining the ‘regular’ bandwagon. In Shenzhen, a batch of large-scale Shanzhai handset manufacturers is proactively applying for licenses and registering brands, preparing for regularization. Deputy Managing Director Liu Wenquan of AHONG Communication points that each Shanzhai handset manufacturer, in fact, hopes to get rid of the title of Shanzhai handsets. For those Shanzhai handset manufacturers which have been regular or are becoming regular, they have experienced the initial stage of accumulating capital, and are about to step into a new development stage of establishing their own brands. “Some manufacturers and distributors are still doing Shanzhai handset business, because they are still in the process of primitive accumulation of capital.”

**State Level Governance and Government Regulation: Tolerance and Regulation**

Handset industry governance and internal governance of Shanzhai handsets all need a proper social and economic environment, which requires proper administrative governance.

The Shanzhai handset belongs to a kind of “shady handset” at first, which is because China stipulated a handset license system in 1998 so as to avoid repeated investment in handset projects and to guarantee a robust development of the national mobile communication industry. Consequently, handset production licenses become scare resources. A large number
of handsets without licenses sprung up in the market. On October 12, 2007, the removal of the administrative control in handset manufacturing industry led to the disappearance of the concept of ‘shady handsets’. The change in policy indicates that the government is adopting a different approach to administrative governance in relation to the handset industry.

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<th>Table 1 Change of China’s Handset License System</th>
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<td><strong>Approval system</strong></td>
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The handset license system embodies strict supervision on handset entry, which is unfavorable to the early stage development of the handset industry. Entry barriers restrict investment of private capital, and some manufacturers acquire privileges and protections. Elimination of restrictions means tolerating the Shanzhai handset and is good for creating a tolerant and fair-competition environment for the handset industry, thereby, effectively and fundamentally putting an end to disadvantages of industry-entry restrictions.

Tolerance is favorable for the development of China’s handset industry today. China is the manufacturing center of the world, which includes not only OEM enterprises that supply manufacturing and production for various global brands but also numerous small-sized manufacturing enterprises and Shanzhai manufacturers. In order to pursue rapid profit returns, all Shanzhai manufacturers begin with imitations at the early period of development. Innovations always start from imitations. According to statistics given by State Intellectual Property Office and National Association of Industry and Commerce, 61% of patents are completed and applied by folk innovators.

It is common practice in many countries to take a tolerant attitude towards new industries. Tolerance of the Shanzhai phenomena can be found at both home and abroad. China has “Shanzhai”, while the US has the “garage”. “Garage” entrepreneurs imitate frequently. For instance, AMD imitated others’ integrated circuit at the beginning of its establishment; 5 years later, AMD self-designed 2901; at the end of the last century, it launched the K7 series CPU. DELL, which was set up in 1984, shared lots in common with those of Shanzai
manufacturers, prosperous in streets selling electronic products.

The growth history of Japanese and Korean enterprises shows that they also make use of Shanzhai methods in large numbers during the early period of development. Sony purchased foreign products for analyzing and researching at the early period. It also conducted all kinds of combinations and innovations on the basis of digesting the core technology, and finally, it launched into the market the products with more functions and better quality than those original ones.

In Hong Kong in the 1950s and 60s, many small Shanzhai factories lacking equipment and management existed in the cabins built at the foot of Lion Mountains. After moving into buildings founded by the government along the districts of Tuguawan and Shixiawei, the industries of Hong Kong grew out of the Shanzhai factories. Shanzhai stands for Hong Kong men’s spirit of diligence, with which to both combating and pursue change.

Tolerance can be classified into three types:

- negative tolerance, which does not seek any action;
- neutral tolerance, which means observing changes without being involved; and
- positive tolerance – including intolerance of “badness” so as to prevent badness and to advocate goodness.

Adopting a similar three pronged strategy experts classify handsets into three types: the first one belongs to smuggled shady handsets which should be strictly cracked down; the second type includes fully copied models or partially imitated handsets, which raise issues of intellectual property rights and other manufacturers’ brands. Such handsets are illegal; the third one is unfamous-brand handsets which can be frequently seen in the market, and which can quickly reflect the consumer’s requirements for the market by making use of handset chip suits. These experts regard the emergence of Shanzhai handsets to be a great innovation in the handset industry of our country, and to be a meaningful revolution in the handset industry chain.

The positive attitude also includes constructive interventions. In order to lead the Shanzhai handset to establish its own brand in Shenzhen, a shopping mall was constructed to sell regular handsets. The mall was used for exhibition and promotion of the Shanzhai handset to the public. Now, a batch of large-scale Shanzhai handset manufacturers are actively applying for trademark registration as they explore prospects of regularization.

The constructive intervention process means reducing net-entry test fees. The reason of not taking the net-entry test for the Shanzhai handset is the following two: firstly, manufacturers cannot afford net-entry test fees; secondly, they have no time to waste for the long-drawn-out test. It would take several hundred thousand Yuan and at least one and a half months to test a particular handset. At present, only one laboratory, a non-profit institution under government control, in Beijing conducts the net-entry test. The expensive test fee and the prolonged net-entry test time does not help with the adaptation to the requirements of the market where changes happen in minutes. If the service in the aspect of net-entry could be improved, or a competitive mechanism could be introduced in the administration of the net-entry, they could have productive outcomes.

The “Shanzhai Culture” and Innovation Governance

_reverse innovation_

The Shanzhai phenomena have spread to all industries of manufacturing. It is interesting to note how the “Temple” is learning from the “Shanzhai”. For example, VIA along with
Microsoft sets up an “Open Super-mobile Industry Strategy Alliance”, helping customers finish designing a complete laptop, which copies the operation mode of “Shanzhai handsets”. The first fifteen downstream manufacturers include Tsinghua Tongfang, E-Lead, YiLi, Great Wall, CZC and fitting manufacturing partners like SanDisk and AMI. For VIA, copying the operation mode of “Shanzhai handsets” has the two advantages: first, it can challenge Intel and AMD with the help of lots of manufacturers in the mainland; second, it can cut down the time of research, production and product shipment to accelerate market response and to reduce cost.

**The Spread of Shanzhai**

A combination survey carried out by China Youth Daily and QQ.com shows that e-pals have different comments to make on “Shanzhai culture”. Within one week, 2,169 persons completed the survey on line; among them 38.7% of persons regard Shanzhai culture as a duplicate culture; 33.7% regard it as a fake culture; 30% regard the core of Shanzhai culture in fact to be a kind of plagiarism; and 24.9% regard Shanzhai to be a synonym for inferior quality. However, a small number of ‘net friends’ consider that Shanzhai products are economical and practical and that Shanzhai culture is very promising particularly for new product development and innovation.

As the Shanzhai phenomena spreads certain features remain constant across a range of products and services. Firstly, the Shanzhai phenomenon is based on a specific platform. In manufacturing industry, technical integration brought about by improvements and adoption of manufacturing technologies provide for a technical platform for Shanzhai manufacturers. The platform of the Shanzhai phenomenon in culture and entrainment industry is a tolerant and loose environment of respecting differences, and maintaining diversity, and a relatively convenient and cheap expressive technique which is owned by the common people.

Secondly, the appearance of Shanzhai products and Shanzhai culture is dependent on a broad market space and a mass base. The cultural field is generally the stage of a few “cultural elite”. Shanzhai culture enables ordinary people to participate in cultural discourse and provides them with an opportunity for seeking novelty, expressing their appeal and self-amusement. Some people consider that Shanzhai in the culture field comes from rebellion against the mainstream, challenge to authority, imitation of elite, and release of grassroots’ depressions.

Thirdly, by depending on others’ brands, Shanzhai manufacturers bring disruptive impacts and shocks for mainstream manufacturers. In the manufacturing industry, their imitations lead to a disturbance of the effect of regular brands and of the regular market order. It also prompts mainstream manufacturers to change their strategies. In the culture and entertainment field, elite behavior, discourse and products are challenged while they are copied. For example, the ‘Shanzhai Spring Festival Gala’ challenged the more exclusive CCTV Spring Festival Gala.

Fourthly, Shanzhai culture needs comprehensive governance. It’s easy for Shanzhai products to infringe on intellectual property rights. So Shanzhai products should be guided properly so as to avoid some negative social consequences. The future development of Shanzhai culture is not clear. It might gradually disappear as it competes for diversification. It may “accept surrender” to the “Temples”, both in China and abroad to adapt. In addition, some typical Shanzhai models may build their own brands. For instance, on October 9, 2004, Variety & Art channel of CCTV launched a talent show named Avenue to Stars, which advocates healthy and elegant art appreciation and builds a platform for the ordinary citizen to showcase their talents.

**Part Six: Conclusions and Problems for Future Investigation**

The Shanzhai phenomenon which is both fashionable and controversial in China, and which attracts attention from all over the world, has a complicated and profound social economic background. The paper analyzes the technical level and market foundation of the phenomenon,
points out the internal mechanism and environmental conditions, and considers Shanzhai phenomenon to have the broadest mass base under certain conditions of technological, economic and social change. It challenges market monopolists and mainstream fashion with its unique way while hovering at the edge of intellectual property rights issues, imitation and innovation. The survival and development of the Shanzhai phenomenon needs comprehensive governance of administration, industry and inside. The findings in this paper suggest that the as the Shanzhai manufacturers struggle to survive in a highly competitive market place, their strategies for varying their methods of operation tend to follow an evolutionary pattern depending on the type of innovation they consider necessary for their growth and development. The selection and retention of technologies, networked links, compliance with registration and co-operation with both global brand players and government legislation, is accompanied by different forms of learning. As figure 7 below shows, each of the stages through which they evolve and learn offers positive and negative outcomes. The way in which they navigate their way through these stages is dependent on the trade-offs between these outcomes. Governance plays a significant role in helping these manufacturers make appropriate choices, with different and relevant forms of governance reflecting the nature of the evolution of the Shanzhai phenomenon.

Figure 7:

Shanzhai Innovation and Governance: An Analytical Framework

It is still unclear which key factors have the biggest influence on the development of Shanzhai manufacturers. Secondly, Shanzhai has helped to bring expensive knowledge-based, hi-tech products, brands, patents, etc. to ordinary people. How can these models be developed to enable consumption expand domestic demand in China. Fourthly, changes in the market development activities of large brand names appear to have been the result of competition by Shanzhai manufacturers. What can brand manufacturers learn from this process to operate more effectively in emerging economies and to generate new business models. Finally, the network-centric structure and its evolution in the Shanzhai market place calls for a network-oriented governance structure involving government, industry and firms. How can these
network governance structures be established so as to legitimize and gain from Shanzhai business models?

Shanzhai lies in that fuzzy state between productive and unproductive or rent-seeking types of entrepreneurship (Baumol, 1997). Their effective governance could obtain more productive value in terms of both their legitimacy and also in relation to the realization of new opportunities. Shanzhai offers an network-based organizational construct which embraces both social and economic values. Its manifestation in a Chinese cultural environment does not necessarily make it difficult to understand Their counterparts in American “garages” and other cultural spaces suggests that there is something to be gained from the commonality of such phenomena.

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Uncovering Secrets of Shanzhai Handset Market, from 30 Minutes Economic Update of CCTV broadcast on June, 2008
Restricted Development of SMEs in Japan’s Software Industry: Reasons and Solutions*

by Nobuhiro Takahashi

This paper examines the reasons that most small and mid-sized enterprises (SMEs) in Japan’s software industry do not develop into large firms. Several papers have already suggested reasons for this phenomenon, but each paper in the literature has given few reasons. This paper analyzes the issue more comprehensively. I first survey the literature and determine five factors that contribute to the issue. Then I show the causal connections among these five factors, demonstrating how they complicate the issue and make it difficult to solve. Finally the paper illustrates several approaches in an effort to find solutions.

Introduction

The Japanese software industry works within a large subcontracting system. Thousands of small and mid-sized enterprises (SMEs) are informally organized under several large companies. Those SMEs have experienced difficulty developing into large firms. This industrial structure has remained for several decades.

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Several authors have taken up this issue in the past; however each paper in the literature has given few reasons for the failure of SMEs to expand to become large companies. Additionally these papers failed to analyze the issue comprehensively. As this paper shows, factors that contribute the issue have causal connections with each other. These connections complicate the issue and make it difficult to solve, and the preceding literature has not fully recognized this point.

This paper proposes five reasons why software SMEs have experienced difficulty in developing into large firms. Then, I show the causal connections among these five factors, demonstrating how these connections complicate the issue and make a solution difficult to identify. I analyze the issue comprehensively and prove that these factors as a whole prevent software SMEs from developing into large firms.

This paper focuses on software firms which develop packaged or custom software. I do not aim to analyze embedded software or game software, as embedded software is simultaneously developed with the hardware of manufactured goods. The game software industry is largely influenced by the Japanese animation culture. Therefore, I distinguish them from packaged and custom software. However, some factors which I describe hold true to embedded and game software in Japan.

This paper is organized as follows. In Section 2, I survey the literature and determine five factors that contribute to the issue. Section 3 shows the causal connections among these five
factors, demonstrating how these connections complicate the issue and make it difficult to solve, and offers solutions. Section 4 concludes this paper by illustrating several approaches in an effort to find solutions.

**Five Factors Preventing Software SMEs from Developing**

**The Division of the Market**

The first factor, the division of the market, stems from the business environment in Japan’s computer industry. Until the early 1990s, Japanese computer manufacturers had been developing both hardware and software. Since the software worked only on the hardware developed by the same manufacturer, it had to be specially developed for the hardware of each manufacturer. This resulted in the partitioning of the software market into many small markets. For the software SMEs, segmentation makes it difficult to spread high fixed costs, so they were not able to develop their own products (Baba et al., 1996).

Since the middle of 1990s, software has worked for hardware made by any computer manufacturer. Therefore, the segmentation does not exist anymore. However, the next section shows that this factor still influences the Japanese software market.

**The Inappropriate Valuation of Software**

The second factor is that the value of software is not appropriately evaluated, and software
development is therefore inappropriately priced. This situation is described by Porter and Takeuchi:

Japanese customers strongly preferred custom software, which was often bundled with mainframe computers by Japanese computer companies. Because they expected software to come ‘free’ with the computer, Japanese customers resisted paying for pre-packaged software separately. That inhibited development of the much more cost-effective software solutions that were widely accepted in the United States and elsewhere (Porter and Takeuchi, 2000).

**Problems Related to Securing Human Resources**

The third factor involves the problems that software SMEs encounter when seeking reliable and efficient human resources. A major reason for this is Japanese students’ image of the software industry. The industry has a reputation for terribly long overtime work as the norm. The image of software industry is hard work, going home late at night or even sometimes sleeping at the workplace and low wages, among other negative conditions. A survey also shows that the largest problem for IT (Information Technology) firms in recruiting newly graduating students is “the bad image of the industry” (Information-Technology Promotion Agency, Japan, 2008). In addition, highly-skilled engineers are not always paid nor promoted appropriately. This custom hampers software engineers’ motivation to acquire more skills.

These conditions negatively affect the ability of the software industry to recruit top students, and cause engineers working for software firms to transfer to other industries.
**Problems Related to Universities**

The fourth factor is problems related to Japanese universities. As the content of research conducted at software engineering firms is far from considered practical use, research in universities rarely contributes to software SMEs, which lack ample funds for their own research and development.

Japanese university education also has several problems. In the 1990s, there existed a lack of professors of computer science to a large extent. Since then there has been an increase in these positions, however it is said that their education is not towards any practical use compared with the United States, India, and other countries (Yamashita ed., 2007). As a result, most Japanese newly-hired software engineers cannot carry out the work of software firms.

**The Lack of Able Engineers**

The fifth factor is the lack of ability and motivation among Japanese software engineers. Tomoo Matsubara, a former engineer at Hitachi, Ltd. attributed to a lack of “creative ideas and products” among the software community (Matsubara, 2001). In addition, the Software Global Competitiveness Research Committee, established by the Institute of Electronics, Information and Communication Engineers in Japan, has stated that “the motivation of Japanese software engineers to capture market is weaker than foreign engineers” (Matsumoto,
Causal Connections of Factors Preventing Software SMEs from Developing

In this section, I show the causal connections among these five factors, and demonstrate how these connections complicate the issue and make its solution evasive.

The Reason why the Inappropriate Valuation of Software is caused

I now consider why the second factor, the inappropriate evaluation of software is caused. As I described in the former section, Japanese computer software had to be specially developed for the hardware of each manufacturer. This business environment resulted in the first factor, the partitioning of the software market into many small markets.

Because of the partitioned market, there was not much competition among computer manufacturers. They earned excess profits from hardware sales, so they tended to handle software as an add-on of sorts, selling it for very low prices. Consequently, Japanese software clients did not place an accurate value on the software, leading to the second factor.

The segmentation of the market disappeared in the middle of 1990s. However, the Japanese clients still inappropriately evaluate the value of software. In other words, they don’t understand the value of software even today. This situation indicates that the first factor
causes the second factor.

**The Cause of the Problem Related to Securing Human Resources**

I now consider the cause of the third factor, problems related to securing human resources. Because software clients have failed to understand the value of software, large software firms in Japan have needed to decrease the cost of developing software by using software SMEs as subcontractors. This practice has resulted in the establishment of a huge subcontracting system in the Japanese software industry.

This subcontracting system causes a further problem. The system is suitable for the waterfall model, which is the most widely-used software development process in Japan. The model requires that each phrase of the software development be perfectly determined and never changed afterward. However, because Japanese clients cannot decide what kind of software they need, they often revise the design of software after it is almost completely developed. This kind of large-scale design change causes significant overtime work for software engineers. This then leads to problems related to securing human resources. This situation indicates that the second factor causes the third factor.

**The Cause of the Lack of Able Engineers**

Next, I consider the causes of the fifth factor, the lack of able engineers. As I discussed
under the third factor, significant overtime hours is common in Japan’s software industry. These working conditions and low wages lead to the decline of the industry's image. In addition, the fourth factor shows that the research and education of universities is far from involved in practical use. These things contribute to the lack of able engineers. This situation indicates that the third and fourth factors cause the fifth factor.

**Concluding Remarks**

This paper examined the reasons why most software SMEs in Japan’s software industry have failed to develop into large firms. I determine five factors that contribute to the issue—(1) the division of the market, (2) the inappropriate valuation of software, (3) problems related to securing human resources, (4) problems related to universities, and (5) the lack of able engineers.

This paper also shows the causal connections among these factors. The first factor causes the second factor, which causes the third factor. In addition, the third and fourth factors cause the fifth factor.

The first factor, the partitioning of the software market into many small markets, resulted in excess profits for hardware sales and lower prices for software. This custom caused the second factor, the inappropriate valuation of software by clients.

Because of the inappropriate valuation of software, large software firms in Japan have
needed to decrease the cost of developing software. They exploit the many software SMEs as subcontractors and use the traditional software development process. However, the development system does not suit the behavior of Japanese clients, resulting in prolonged overtime work for software engineers. This situation results in problems related to securing human resources.

Because of problems related to securing human resources and universities, the software industry has encountered difficulties in recruiting motivated engineers and encouraging them to obtain practical knowledge and skills. These circumstances contribute to the lack of able engineers.

These connections complicate the issue and make it difficult to solve. This is why most SMEs in Japan’s software industry do not develop into large firms. As a result, this industrial structure has remained for several decades.

This paper illustrates several approaches that could be applied to new software development processes in order to solve this issue. As an example, I now take up the problem of large-scale design change by Japanese clients, which leads to the third factor. I suggest two methods of dealing with this problem.

The first method is introducing agile modeling and other iterative software development processes. Agile modeling adjusts design change more easily compared with other software development processes. Other iterative software development processes also adjust design
change easily compared to the waterfall model. By using these processes, software engineers can avoid long overtime work, which contributes to the difficulties in securing human resources.

It is sometimes said that the agile modeling is not suited to large-scale projects. In fact, there are so many Japanese projects that hundreds of engineers participate in using the agile model. Therefore, the agile model and other iterative software development processes are applicable to various projects.

The second method is for software firms to demand appropriate compensation for each design change. Japanese clients usually pay smaller compensation for design change compared to the amount of work associated with the task. Therefore software firms must reduce their costs for changing the design by decreasing the number of software engineers for the task. This is one of the reasons for long overtime work. However, some foreign software firms in Japan already demand appropriate compensation from their clients for design changes. If many Japanese firms did this, overtime work would be shorter.

Successful cases through these methods would create new business models, which would set Japanese software firms free from the above causal connections. Firms and governments must cooperate with each other to produce these trends.

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1 IBM Japan started positively exploiting agile modeling in 2006. The firm implemented more than 320 projects using the model for three years until 2009.
References


Abstract

Two research issues are examined using a panel data of new technology-based firms (NTBFs): whether the involvement in research collaboration with universities contributes to improving research productivity of NTBFs; and which type of NTBFs are likely to receive spillover via research collaboration. Estimated treatment regression models reveal that NTBFs collaborating with universities and public research institutes in research demonstrate higher research productivity. The positive impact of research collaboration on research productivity is salient when NTBFs experience in collaboration with any partners, or possess greater or small absorptive capacity.

Keywords: research collaboration; universities; new technology-based firms; research productivity; spillover
1. Introduction

After the Plaza Accord on exchange rates in 1985 that admitted strong Yen, Japan experienced two major upheavals in economy: the emergence and collapse of the bubble economy during 1985 and 1989; and a very long-term slowdown in 1990s and 2000s (except for during 2001 and 2006, the period when structural reforms under the Koizumi administration were working). The crucial factor that accounts for the serious stagnation encountered by the Japanese economy is not a financial crisis per se, but downturn in total factor productivity growth. New technology-based firms (NTBFs) that are young and attempt to enter markets by introducing new products are a significant source of total factor productivity growth, since they improve industrial metabolism by promoting entry of new firms and exit of inefficient incumbents, and promote industrial innovations. Supporting NTBFs has a positive implication on macroeconomic growth but policy instruments for the promotion of NTBFs are distinct from those applied to other small firms (Tether and Storey, 1998; Storey and Tether, 1998). Compared to other small firms, the source of innovation of NTBFs is more science-based, implying that the promotion of knowledge interaction with universities and public research institutes will improve their innovative capacity. The previous literature supports this view by indicating that NTBFs are a significant recipient of spillover via research collaboration with universities and public research institutes.

Based on a review of extant theoretical and empirical studies, a panel data on NTBFs, and an econometric model taking account of an endogeneity problem, this study examines whether cooperative research with universities contributes to improving the efficiency of the knowledge resources, and if so, which type of NTBFs are more likely to receive spillover via cooperative research with universities.¹ Foreshadowing the results, NTBFs collaborating with universities and public research institutes in research

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¹ NTBFs are defined as small, R&D-performing firms that are not subsidiaries. The Basic Law on Small and Medium Enterprise defines small firms in the manufacturing sector as firms with 300 employees or fewer, or firms with capital of 300 million Yen or less. The threshold applied varies according to industry.
show higher research productivity, and the positive impact of research collaboration on research productivity is salient when NTBFs experience in collaboration with any partners, or possess greater or smaller absorptive capacity.

The remainder of this paper is organized as follows. Based on an extensive review of the previous theoretical and empirical studies, hypotheses on the relationship between cooperative research with universities and research productivity of NTBFs are proposed in Section 2. The econometric model and the dataset are introduced in Section 3. In Section 4, implications of empirical findings are discussed and Section 5 refers to agendas for future research.

2. Hypotheses

Theory suggests that R&D cooperation affects research efficiency of the participants in two distinct ways. First, R&D cooperation enables participants to share the fixed costs of R&D and avoid overlapping investment. This improves R&D efficiency by reducing individual R&D expenditure and dividing R&D tasks to exert economies of scale. Irwin and Klenow (1996) show that this argument holds true for SEMATECH, interfirm R&D cooperation in the US semiconductor industry. Second, R&D cooperation enables participants to share technological skills and improves the quality of R&D personnel via spillover, which may result in an increase in individual R&D expenditure (Sakakibara, 2003). Link and Bauer (1989) show that although cooperative research per se does not yield significant innovation outputs, high-tech firms engaging in cooperative research can exploit their knowledge resources more efficiently for successful innovations, indicating spillover via cooperative research. Cooperative research is conducive to spillover because it implies a close communication among scientists affiliated with different institutes. Face-to-face communication is required to transfer not-codified knowledge embodied in researchers (Von
The second channel in which cooperative research affects the efficiency of NTBFs’ innovation activities is important in university-industry collaborations. Odagiri et al. (1997) indicate that the research consortium on the fifth-generation computer project is designed to maximize knowledge transfer among participants by encouraging the interorganizational mobility of star scientists and engineers affiliated with universities and industry. It is reasonable that frequent communication among R&D personnel affiliated with different institutes through R&D cooperation fosters the transfer of tacit knowledge and improves the quality and usage of knowledge resources. A number of empirical studies in various regions indicate a positive impact of research alliance with universities on research productivity of NTBFs via spillover. Small high-tech firms that engage in university-based research are more likely to improve R&D efficiency, compared to their larger counterparts (Link and Rees, 1990). Small high-tech firms collaborating with local universities are likely to achieve new product development (Acs et al., 1994; Romjin and Albaladejo, 2002). Motohashi (2004) indicates that younger R&D-performing firms are likely to exploit university knowledge via cooperative research more efficiently to achieve technological and commercial success in innovation. Furthermore, recent studies examining small biotech firms indicate a positive correlation between their research alliances with universities and research productivity (Deeds and Hill, 1996; Powell et al., 1996; Zucker et al., 1998; Baum et al., 2000; Rothaermel and Deeds, 2004). Such advantage of small biotech firms may partly stem from sectoral characteristics that innovations in biotechnology depend heavily on public knowledge (McMillan et al., 2000), and, more importantly, may stem from that small firms have more to learn from external sources of knowledge with a greater potential for growth stimulated by knowledge linkages (Sakakibara, 1997).

**H1:** NTBFs with collaborating with universities in research are likely to show higher research productivity, compared to NTBFs without research collaboration with universities.

---

Theory suggests that establishing university linkage does not necessarily imply the improvement of research efficiency because spillover and absorptive capacity are complementary (Cohen and Levinthal, 1990; Kamien and Zang, 2000). Since cooperative research implies that participants match contributions in research and learn mutually, absorptive capacity represented as knowledge stock within the firm is necessary for entering into and exploiting knowledge linkages between economic organizations. Firms with absorptive capacity attract more potential R&D partners (Ahuja, 2000) and thus have more opportunities to establish research alliances with various partners, which leads the firm to be central in the knowledge network and to acquire a positive rent (Powell et al., 1996; Powell et al., 1999; Powell et al., 2005). Therefore, it is predicted that NTBFs with greater absorptive capacity are likely to exploit university research as a source of innovations more effectively than others.

H2: The impact of research collaboration with universities on research productivity of NTBFs is salient in the case of NTBFs with greater absorptive capacity.

Research alliance is not without hazard. R&D cooperation entails risk of leaking valuable knowledge as well as benefit from knowledge transfer (Sakakibara, 1997; Baum et al., 2000; Branstetter and Sakakibara, 2002), implying the dilemma between sharing and appropriating knowledge. Firms competing in the same product market may attempt to learn from others as much as possible while concealing their own knowledge that is valuable for innovation, which discourages firms to collaborate or to exert research effort in collaboration (Katz, 1986). This type of dilemma affects not only interfirm R&D cooperation but also university-industry research collaboration (Rothaermel and Deeds, 2004). The previous literature suggests working solutions to this problem. First, cooperative research tends to take place in the phase of basic research rather than in the phase of applied research (Link and Bauer, 1989;
Link et al., 2002), where the serious conflict of commercial interest is unlikely. Second, and more importantly, establishing organizational assets among participants reduces coordination costs stemming from opportunism such as free-riding (Dyer and Nobeoka, 2000; Kale et al., 2000; Kogut, 2000). Transaction cost theory suggests that frequent transaction generates organizational assets. For more effective knowledge transfer, organizational assets play a more significant role in the case of an interactive channel such as cooperative research, than in the case of less interactive channels such as technical consultation (Izushi, 2003). Therefore, it is predicted that organizational assets enable NTBFs to assimilate knowledge flow from universities more effectively.

**H3**: The impact of research collaboration with universities on research productivity of NTBFs is salient in the case of NTBFs with more organizational assets.

3. Method

The formation of research alliance is a choice variable of the firm. Put differently, the probability of engaging in joint research with universities is not distributed randomly across NTBFs. If the probability is affected by the factors that cannot be measured by available data, and those factors affect research productivity of NTBFs too, a statistically significant relationship between research collaboration and firm performance revealed by usual econometric approach might be spurious. In this regard, recent progress in econometrics enables us to deal with endogeneity problem appropriately. This study employs the treatment regression model to estimate the true impact of cooperative research on research productivity. The econometric model is described as follows.

\[
Y_{it} = a + b^*X_{it} + c^*D_{it} + u_{it} \quad (1);
\]

For theoretical development and empirical applications of the two-step or recursive model to estimate policy impact with controlling for endogeneity, see Heckman et al. (1999), and Greene (2000).
\[ D_{it} = d^*Z_{it} + v_{it} \quad (2); \]

where \( Y \) denotes research efficiency measured as inventions applied for the Japan Patent Office between \( t \) and \( t+1 \) divided by the number of scientists at the time of \( t \), \( X \) denotes determining factors in research efficiency, \( D \) denotes a binary dummy taking a value of one when the firm engages in cooperative research with universities and public research institutes at the time of \( t \), and zero otherwise, and \( Z \) denotes determining factors in research collaboration. If OLS is run on Equation 1 using the pooled data of cooperative research-active and cooperative research-inactive firms, the estimated impact of collaboration tends to be inappropriate due to endogeneity. This is because \( D \) in Equation 1 is not a random but a choice variable, and thus is associated with unobservable factors, i.e., \( u \) in Equation 1. The treatment regression model estimates Equation 2 using probit model, and then estimates Equation 1, incorporated with selection correction variables, using OLS. To satisfy the assumption of normally distributed dependent variable in OLS, \( Y \) is log transformed. For this purpose, a value of one is added to the number of patent application before divided by the number of scientists, since many firms report zero for patented inventions.

An unbalanced panel on NTBFs was established using “Nationwide Research Institutes Directory,” compiled by Lattice. This biannual survey collects information on universities and public research institutes, and also provides information on research activities of approximately 500 small, R&D-performing firms.\(^5\) The dataset of survey conducted in 1996, 1998, 2000, and 2002 is collected. The data of patent application is collected from patent database that is opened to the public, the National Center for Industrial Property Information, “Industrial Property Digital Library”. As noted above, the relationship between cooperative research and innovation output yielded following two years is examined. This is because this research is not focused on direct output of cooperative research. It is assumed that spillover effect via collaboration improves the quality and usage of knowledge resources that are allocated for other research projects as well, which may elicit the effect in a relatively short period of time. For the same\(^5\) No financial indicator is available from this survey.
reason, patent applications instead of grants are used to measure innovation output. Due to the database constraints, simple patent counts without controlling for value or quality of knowledge are used, while innovation counts or weighted patent counts are better indicators of innovation output than simple patent counts (Griliches, 1990; Trajtenberg, 1990; Acs et al., 2002). Due to sectoral characteristics such as technological opportunities and appropriability, the probability of engaging in cooperative research with universities and patenting inventions significantly varies across industries (Levin et al., 1984; Pavitt, 1984; Cohen et al., 2000). Therefore, industry dummy variables are introduced in regression models representing Equations 1 and 2. Brower and Kleinknecht (1999) indicate that smaller firms show a lower propensity to patent due to difficulty in obtaining sufficient information and application costs. Therefore, firm size represented as the number of employees is introduced in regression models representing Equation 1.

4. Results

Table 1 presents sample statistics for variables. Table 2 shows research intensity, defined as the number of scientists divided by the number of employees of the firm, and the degree of involvement in cooperative research with universities and public research institutes by industry. The results show a significant inter-industry variation in technological opportunities represented as research intensity. In high-tech sector, such as electronics, firms tend to allocate more knowledge resources to innovation activities than other sectors. Analytical service industry shows the highest research intensity and the highest probability of engaging in cooperative research with universities. High-tech sectors such as chemical and electronics show relatively low propensity to engage in cooperative research with universities while relatively low-tech sector such as textile shows higher propensity to engage in cooperative research with universities.

_____________________

Tables 1 and 2 about here
Table 3 presents the results of regression analyses. Model 1 shows the result of estimation using the entire observations. Regarding Equation 2, NTBFs with smaller absorptive capacity tend to engage in cooperative research with universities, which contradicts my prediction. Age of the firm has no correlation with the probability of establishing university linkages. Regarding Equation 1, smaller firms show higher research efficiency. Cooperative research with universities has a positive impact on research efficiency of NTBFs, which supports H1. This is consistent with a number of empirical findings in various regions that show the positive relationship between cooperative research with universities and improved research productivity of small high-tech firms.

Is the effect of collaboration with universities on research productivity contingent on other factors such as organizational assets and absorptive capacity of the firm? Models 2 and 3 show the result of estimation using observations with and without organizational assets. Organizational assets are measured as experience in cooperative research with any partners including competitors, customers, suppliers, and research institutes. Regarding Equation 2, absorptive capacity negatively correlates with the probability of engaging in cooperative research with universities in Model 2 while there is no significant relation between the two variables in Model 3. Regarding Equation 1, smaller firms show higher research efficiency in both models. Cooperative research with universities has a positive impact on research efficiency in both models, but the coefficient is greater and more statistically significant in the case of NTBFs with experience in research collaboration, which supports H3. The results indicate that NTBFs with experience in cooperative research acquire organizational skills to manage collaborative relationships and assimilate knowledge of universities and public research institutes more efficiently. This is consistent with empirical findings showing the positive correlation between experience in research collaboration and spillover via research collaboration (Branstetter and Sakakibara, 1998; Anand and Khanna, 2000).

Models 4, 5, and 6 show the result of estimation using observations classified according to the
level of absorptive capacity. Although the capacity to assimilate external knowledge is affected by knowledge that is already accumulated within the firm, i.e., knowledge stock, research intensity is used as a proxy variable for absorptive capacity due to data constraints. Observations are classified into three groups: observations with research intensity greater than 75 percentile; observations with research intensity smaller than 75 percentile but greater than 25 percentile; and observations with research intensity smaller than 25 percentile.\(^6\) Regarding Equation 2, absorptive capacity plays different roles as determinants in conducting cooperative research according to the categories. Among NTBFs with the greatest absorptive capacity, there is a negative correlation between absorptive capacity and the probability of engaging in cooperative research, while there is no significant relation between the two variables regarding NTBFs with medium and low level absorptive capacity. These results are partly consonant with arguments that firms with great absorptive capacity will find it unnecessary to establish alliance while firms with poor research quality will find it difficult to attract potential partners, implying the inverse U-shaped relation between absorptive capacity and the probability of engaging in cooperative research (Mowery et al., 1998; Ahuja, 2000; Sakakibara, 2003). Regarding Equation 1, smaller firms show higher research efficiency in all models. That firm size negatively correlates with research efficiency in all models in Table 3 suggests the possibility that, as firms grow, they may expand innovation activities to the extent of unrealistic research programs with poorer chance to succeed (Cohen and Klepper, 1996). There is a positive and significant correlation between cooperative research with universities and efficiency of research activities in the case of NTBFs with greater absorptive capacity while there is no significant relation between the two variables in the case of NTBFs with medium level absorptive capacity, which supports H2. However, there is also a positive correlation in the case of NTBFs with smaller absorptive capacity, and the coefficient is greater than in the case of NTBFs with greater absorptive capacity, which contradicts my prediction. The result in Model 4 implies that highly research-intensive NTBFs are likely to go it alone

\(^6\) The main results remain unchanged by using alternative thresholds for research intensity such as 33 percentile and 66 percentile.
because they face greater risk of leaking valuable knowledge and have more difficulty in finding an equivalent research partner, however, once they have established university linkages, they exploit the interactive channel of knowledge transfer most effectively, which suggests complementarity between spillover and absorptive capacity (Cohen and Levinthal, 1990; Kamien and Zang, 2000). The result in Model 6 implies the U-shaped relation between absorptive capacity and the impact of research collaboration with universities, since two extremes are advantageous in exploiting university knowledge via research collaboration. This may reflect that, among NTBFs with low absorptive capacity, there is a greater potential for growth stimulated by knowledge linkages with universities and public research institutes (Sakakibara, 1997).

5. Conclusion

As Jaffe et al. (1993: 596) point out, it is important to investigate the mechanism of knowledge transfer as well as the presence of spillover, and this study contributes to the previous literature on both research issues. As for the presence of spillover, the results show that knowledge created by universities and public research institutes is a significant source of improved research productivity of NTBFs. As for the mechanism of spillover, the results show that cooperative research is a significant channel of knowledge transfer from public knowledge to NTBFs, and that NTBFs with organizational assets and NTBFs with greater or smaller absorptive capacity are significant recipients of spillover. More important research question will then be how efficient university-industry knowledge transfer via various channels is promoted in the national or regional system of innovation. Recent innovation studies pay an increasing attention to spillover that is contingent on the geographical proximity to the spillover pool, and thus to
policy instruments that facilitate university-industry knowledge flow within the region. Therefore the future research will investigate whether property-based initiative such as science parks contributes to the promotion of knowledge interaction between NTBFs and universities, and whether the interregional variation in university-industry knowledge flow correlates with the interregional variation in research productivity.

References


Table 1 Descriptive statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>Min</th>
<th>Max</th>
</tr>
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<tbody>
<tr>
<td>Collaborating in research with universities=1, otherwise=0</td>
<td>1002</td>
<td>0.592</td>
<td>0.492</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Log (patent applications per scientist)</td>
<td>1860</td>
<td>-1.354</td>
<td>1.089</td>
<td>-4.488</td>
<td>2.079</td>
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<td>Log (firm age)</td>
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<td>0</td>
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<tr>
<td>Log (the number of employees)</td>
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<td>6.978</td>
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<td>-1.778</td>
<td>0.975</td>
<td>-5.521</td>
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</tbody>
</table>

Table 2 Research intensity and the degree of involvement in research collaboration with universities and public research institutes by industry

<table>
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<tr>
<th>Industry</th>
<th>Research intensity</th>
<th>Involvement in research collaboration</th>
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<tbody>
<tr>
<td>Food</td>
<td>0.154</td>
<td>0.458</td>
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<tr>
<td>Textile</td>
<td>0.074</td>
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<tr>
<td>Chemical</td>
<td>0.220</td>
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<tr>
<td>Ceramic</td>
<td>0.182</td>
<td>0.593</td>
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<tr>
<td>Metal</td>
<td>0.121</td>
<td>0.381</td>
</tr>
<tr>
<td>Machinery</td>
<td>0.202</td>
<td>0.360</td>
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<tr>
<td>Electronics</td>
<td>0.307</td>
<td>0.349</td>
</tr>
<tr>
<td>Precision</td>
<td>0.229</td>
<td>0.449</td>
</tr>
<tr>
<td>Other manufacturing industries</td>
<td>0.235</td>
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</tr>
<tr>
<td>Information service</td>
<td>0.396</td>
<td>0.310</td>
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<tr>
<td>Analytical service</td>
<td>0.561</td>
<td>0.611</td>
</tr>
<tr>
<td>Not elsewhere classified</td>
<td>0.313</td>
<td>0.298</td>
</tr>
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</table>

1. Research intensity is defined as the ratio of scientists to employees.
<table>
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<tbody>
<tr>
<td>N</td>
<td>957</td>
<td>542</td>
<td>109</td>
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<tr>
<td>Coef. S.E. P</td>
<td>Coef. S.E. P</td>
<td>Coef. S.E. P</td>
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<tr>
<td>Equation 1 (dependent variable: logged patent applications per scientist)</td>
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<tr>
<td>Log (years from establishment of the firm)</td>
<td>0.342 0.341</td>
<td>0.219 0.476</td>
<td>0.101 0.425</td>
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<td>12.284 5.277 **</td>
<td>5.190 2.726 *</td>
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<tr>
<td>Year dummy</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Equation 2 (dependent variable: collaborating in research with universities=1, otherwise=0)</td>
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<td></td>
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<tr>
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<td>-0.072 0.076</td>
<td>-0.061 0.110</td>
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<td>Yes</td>
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<tr>
<td>Year dummy</td>
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<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Constant</td>
<td>1.013 0.402 **</td>
<td>1.348 0.621 **</td>
<td>5.301 0.885 ***</td>
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Table 3 (Continued)

<table>
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<tr>
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<td>0.317</td>
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<td>-0.705</td>
<td>0.051</td>
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<td>1.997</td>
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1. *** p<0.01, ** p<0.05, * p<0.1
2. Model 1: regression using the entire observations
3. Model 2: regression using observations with experience in cooperative research with any partners
4. Model 3: regression using observations without experience in cooperative research with any partners
5. Model 4: regression using observations with research intensity greater than 75 percentile
6. Model 5: regression using observations with research intensity smaller than 75 percentile but greater than 25 percentile
7. Model 6: regression using observations with research intensity smaller than 25 percentile
A Fourth Way Between Regular, Social and Green Entrepreneurs:  
The Sustainable Entrepreneur

by Katia Richomme-Huet, and Julien De Freyman*

We want to encourage the debate and to confront points of view (about the problematic of entrepreneurship), and perspectives (managerial and political implications, global program of research). Our theoretical reflexion suggested the construction of sustainable trajectories from which each type of entrepreneur (regular, social, green and sustainable) could gain in comprehension. This research proposes to supplement this prospect by subjecting it to an empirical exploration. Multiple case studies will serve its reading and its operationalisation.

Introduction
There has been much written about Entrepreneurship over the last decades (Gartner, 2008) and there is considerable debate about the purpose of entrepreneurship research (Davidsson, Low & Wright, 2001). The literature identifies several theoretical perspectives from which the domain could be understood and explored: entrepreneurship as an economic function (Cantillon, 1775 ; Knight, 1921), entrepreneurship as innovation (Schumpeter, 1935), entrepreneurship as organizing (Gartner, 1993, 2001), entrepreneurship as value creation (Bruyat and Julien, 2000), entrepreneurship as opportunity recognition (Venkataraman, 1997 ; Shane and Venkataraman, 2000 ; Shane, 2003) or entrepreneurship viewed in behavioural terms (McClelland, 1961 ; Carland et al., 1988 ; Aldrich and Zimmer, 1986 ; Delmar, 1996).

However, although the lack of an agreed definition of entrepreneurship has been clearly hampering the development of the field (Eckhardt and Shane, 2003), the consensus about how entrepreneurship is important to economic development and growth was rapidly established. Hence, entrepreneurs were considered as the single most important player in a modern economy (Lazear, 2002). What is less considered is the emergence of new types of entrepreneurs in developed countries and the future consequences of their entrepreneurial activities on the world economy. After focusing on the links between Entrepreneurship and Economic Growth (Audrestch, 1995), the “New Deal” for entrepreneurs is to be the engine of sustainable development (Pacheco, Dean and Payne, 2009). Many scholars consider entrepreneurs as the drivers of the next industrial revolution for a more sustainable future and decline new terms such as “sustainable entrepreneurship (Dean and McMullen, 2007), green entrepreneurship (Berele, 1991), environmental entrepreneurship (Anderson and Leal, 2001; Dean and McMullen, 2007; Keogh and Polonsky, 1998), ecopreneuring (Bennett, 1991; Blue, 1990; Shaper, 2002), and social entrepreneurship (Dees, 2001)” (Pacheco, Dean and Payne, 2009). So, following pioneer scholars, we want to provide an explicit link between Entrepreneurship and Sustainability, by asking “why and how do these new entrepreneurs matter?” The remainder of this paper is organized as follows. First, we lay down the theoretical bases of our study, namely regular, social, green and sustainable entrepreneurs. We expound a theoretical and methodological model that formalizes some of the key insights indentified in the literature. Second, we describe the methodology and the sample, which is analyzed and discussed.

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LITERATURE REVIEW

Scholars identified in the last decades four main classes of entrepreneurs: first, the field of entrepreneurship focuses on “regular entrepreneur”, an individual who creates a venture for his self-employment or for the development of his business project. Then, “social entrepreneurs” decided to create an organization such as association or cooperative, in order to help individuals and to contribute to well-being. They can also only exploit the opportunities related to the personal services. The third category cares more about environmental challenges, with the objectives to wash the world from pollution and climate changes: they are called “green entrepreneurs” and, sometimes, are suspected of “green-washing” to surf the green wave and to gain more profit. Then, last but not least, a new entrepreneur type is described as a combination of the three first.

Regular entrepreneur

The regular entrepreneur is someone who assumes both the risk and the management of a business venture (risk-taker). His objective is to add value through profit by introducing news goods or new methods of production and implementing change in an economy (Schumpeter, 1942). So, he will start a profit-seeking business venture in the Say-Schumpeter tradition, reaffirmed by Drucker (1998), as a catalyst and innovator for the economic progress. Recently, according to Lumpkin and Dess (1996), the entrepreneurs launch new venture towards various ways: starting up, taking over or corporate venturing. They discover (Kirzner, 1979) and exploit opportunities (Shane, 2003) in order to gain profit and without regard to resources currently controlled (Sahlman and Stevenson, 1991). We agree with the idea that an entrepreneur is also a manager (or an administrative) who knows that his firm must generate enough profitability or cost-effectiveness to survive. A regular entrepreneur is not attracted only by wealth creation but his position on for-profit market needs financial resources and return on investment. Wealth is not only end but it is fundamental means to avoid failure. Indeed, “entrepreneurs not only seek out and identify profitable economic opportunities but are also willing to take risks to see if their hunches are right” (OECD, 1998:11).

Social entrepreneurs

However, generating profit and social value is also a possibility which receives increasing attention from the new social entrepreneurs. Although scholars and practitioners have proposed a plethora of definitions for social entrepreneurship, no generally accepted definition exists in the research community (Brock, 2008; Short, Moss and Lumpkin, 2009). According to Dees (2001), “social entrepreneurs are one species in the genus entrepreneur” with a central and explicit social mission, rather than a wealth creation. Considering this tendency, Austin, Stevenson & Wei-Skillern (2006:2) had recently noted, as an underlying drive, that the social entrepreneurs create social value rather than personal and shareholder (Zadeck and Thake, 1997) and introduce innovation rather than replication. They consider that we can combine the triple ideas of “social value”, “innovation” and “profit approach”. There is no consensus on what exactly is the essence of social entrepreneurship. But Light (2008) purposes a basic agreement shared by most authors: “social entrepreneurship must change the status quo by creating social value (Dees), systemic social change (Drayton), a new social equilibrium (Martin and Osberg)or pattern-breaking change (Light)”. Global Entrepreneurship Monitor (GEM) recently decided, in an attempt to examine the prevalence and nature of entrepreneurship with a social purpose, to adopt a broad definition: social entrepreneurship is defined as individuals or organizations engaged in entrepreneurial activities with a social goal (Mair and Marti, 2006 ; Van de Ven, Sapienza and Villanueva,
2007; Zahra et al., 2008; GEM, 2010). This definition fits with Dees’s first suggestion (2001), a social mission. More scholars are getting involved as social entrepreneurship members, accompanied by several national foundation heavily invested in research: Ashoka, the Skoll Foundation and the Schwab Foundation.

**Green entrepreneur, Ecopreneur or Enviropreneurs**

External conditions (economic, regulatory, social, environmental and combinations of these) create opportunities (Howard-Grenville, 2007) that can be exploited by firms and entrepreneurs. Since the nineties, scholars argued that holistic green business solutions can contribute to increase value creation (Porter and Van der Linde, 2005) and to introduce a new comprehensive business philosophy and culture (Nair, 2004). Their main contribution is to making environment matter. Green entrepreneur (Isaak, 1998; Walley and Taylor, 2005), also called ecopreneur (Schaper, 2002), or environmental entrepreneur, nicknamed “enviropreneur” (Keogh and Polonsky, 1998; Linnanen, 2002) want to preserve natural resources and act as a 'pull' factor that entices other firms to proactively go green” (Schaper, 2002). Ndubisi and Nair (2009) introduce the concept of Green Value Added (GVA), in order to encourage entrepreneurs to build “sustainable” ventures based on environmental and social issues. But they are aware that only green entrepreneurs who founded SMEs are the ideal applicants for this green platform and big challenge for nations. As Audrestch (1995) argues, entrepreneurs are agent of change so they can introduce subsequently new ideas in the market. But what differentiate entrepreneurs who are social, regular or green from those who are sustainable? And why is important to introduce and study this new kind of entrepreneurs?

![Figure 1: Taxonomy of Entrepreneurs defined according to their values](image)

**Sustainable entrepreneur: a regular entrepreneur with important ecological and social values**

Sustainability can be considered as an entrepreneurial strategy either corporate or individual and called green washing, or as an opportunity to preserve natural resources and to change the world. In these two visions, sustainability is divided into several degrees, from weak to strong importance for the entrepreneur (Dean and McMullen, 2007; Cohen and Winn, 2007). Schaper (2002) highlights the issue of balancing three variables: economic and commercial imperatives (wealthy and efficient economic system), environmental considerations (to maintain and enhance the state of the earth) and social justice factors (individual and community needs). According to these variables, a sustainable entrepreneur is an individual
who discovers, evaluates and exploits opportunities and creates value that produces economic prosperity, social cohesion and environmental protection (Katsikis and Kyrgidou, 2009).

**Research questions**
Entrepreneurship theory and empirical practice were mobilized in order to investigate a primary research question: How can an entrepreneur decide to become sustainable? Does he/she perceived himself/herself (or is perceived) as regular, social or green entrepreneur? If so, do they stay in this category or do they decide to move to another one? Exploring these questions will provide a first comprehension of the process by which sustainable entrepreneurs can emerge in developed countries.

**METHODOLOGY**
Our basic proposition is that entrepreneurs can change their initial position from regular to sustainable, passing or not by social or environmental, with a direct trajectory, or moderate the change steps by steps, degrees by degrees, under specific conditions, constraints or personal values. We construct a methodological framework to identify the profile of an entrepreneur according to the venture he/she created, the activities, the motivations and values they defend when they decide to create.

**Figure 2: Methodological representations of theoretical profiles of entrepreneurs**

<table>
<thead>
<tr>
<th>R.E. = Regular Entrepreneur</th>
<th>N.E. = Non Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.E. = Green Entrepreneur</td>
<td>S.O. = Social Opportunis</td>
</tr>
<tr>
<td>S.E. = Social Entrepreneur</td>
<td>E.O. = Ecological Opportunis</td>
</tr>
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</table>
**Phenomenological methodology**

As per Sarasvathy (2004) and Busenitz and al. (2003), entrepreneurship needs enactive design and interpretation. Phenomenology assists our comprehension of how the things are experienced by entrepreneurs themselves (Bogdan and Taylor, 1975). Things, acts and facts exist in the meaning that individual attach to them. According to Berglund and Hellström (2002), these methods authorize the scholars to investigate the way that entrepreneurs interpret and enact their actions and decisions.

**Sampling**

This study sought to elucidate the trajectories of specific entrepreneurs. Sampling focuses on getting a relevant group of individuals with whom the investigated phenomenon will be salient. We decided to present interesting and well-known cases, such as success stories easy to track down; we identified sixteen entrepreneurs distributed across the world, who actually are considered as social, green or sustainable entrepreneurs. We collected secondary data about their lived experiences of the business they created. In an exploratory phase, we have decided to find a representative data, in order to illustrate our theoretical profiles of entrepreneurs (Thompson, 1999; Walley and Taylor, 2002).

**Data presentation**

<table>
<thead>
<tr>
<th>Entrepreneur &amp; Enterprise</th>
<th>Concept</th>
<th>Personal history and believes</th>
<th>Trajectory</th>
</tr>
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<tbody>
<tr>
<td>Rodrigo Baggio Brazil</td>
<td>Create schools and train teachers to allow the children from the slums to connect to the internet and improve their future thanks to computer skills</td>
<td>From an early age, R. Baggio cultivated two passions: computing and voluntary work. He left school and went to join the computing teams of an American company (artificial intelligence programs). A few years later he created his own publishing firm. His success gave him the opportunity to devote himself to young Brazilians through the creation of the website JovemLink (online discussion). After that, thanks to a national campaign to salvage computer equipment, he set up the first computing school in the Dona Marta favela (in association with the local parish and a NGO). Today there are more than 900 computing schools throughout Brazil. From an early stage his parish involvement in youth movements made him aware of the difficulties in the favelas, however perhaps it also give him the impression that he was not achieving his full potential. On the other hand, R. Baggio understood that his success could help him to achieve this by giving him the means (time, money, network, etc.) to fight poverty in the favelas.</td>
<td>Sal. $\rightarrow$ R.E. $\rightarrow$ S.E. $\rightarrow$ T$_{E1}$</td>
</tr>
<tr>
<td>Thierry Kazazian France O2 France</td>
<td>Integrate ecological criteria in the product life-cycle approach (eco-design).</td>
<td>From the end of the 80’s along with other architects and designers from the Domus Academy in Milan, T. Kazazian was convinced that the environment should be taken into account during the conception process of a product. Together they decided to create a network of designers who were environmentally conscious: O2 GlobalNetwork. At the same time in 1988, T. Kazazian founded O2 France to promote a “sustainable and desirable development”. He went on “the assessment that ecology did not mean depriving oneself of objects, but rather rethinking them, designing them differently so as to use them more intelligently” (Catherine Ronge, O2 France). The Torre Canyon oil slick in 1969 is one of his first childhood memories.</td>
<td>G.E. $\rightarrow$ T$_{E2}$</td>
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<td>Entrepreneur &amp; Enterprise</td>
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<td>Personal history and believes</td>
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<tr>
<td>Neil Peterson Flexcar</td>
<td><strong>Reduce the ecological impact of transport by broadcasting an attractive and intelligent car-sharing model</strong></td>
<td>The founder of Flexcar has had a distinguished career in the public service including that of CEO of the public transportation agencies in the Los Angeles, Oakland and Seattle metropolitan areas, as well as working for two U.S. congressmen, two governors and being a City Manager. When he was back from Switzerland, in the 1990’s, he decided to introduce the concept Flexcar “a time-share for automobiles” to the United States (twelve cities across the country). The company’s innovative business model helped Americans reduce their reliance upon foreign oil, fight global warming and make their cities more livable. In 2005, Steve Case of AOL, purchased Flexcar (in 2007, Flexcar merged with Zipcar). Neil has also founded four other businesses including an international transportation consulting firm, a company providing interim executive management, a travel and tour company, and a private fishing club. During his career he has served as CEO, COO or CFO of six other companies. Today, in his role as the head of the not-for-profit Edge Foundation, N. Peterson is a leading advocate for the disabled (his two children were diagnosed in their mid-teens with ADD/ADHD).</td>
<td>Sal. → R.E. → G.E. → Su. E. T&lt;sub&gt;E3&lt;/sub&gt;</td>
</tr>
<tr>
<td>Geneviève Ferone Coreratings</td>
<td><strong>Make social and environmental measures choice criteria for investors</strong></td>
<td>After having lived in Africa until the age of 17, then going on to excel in studies of International Economic Law, G. Ferone started by working for international organizations (ONU, OCDE), before joining KHN Consulting, based in San Francisco (from 1992 to 1996). She developed an expertise in the study of pension funds and socially responsible investment. In 1997, she decided to create Arese, the first agency for the environmental and social rating of listed companies. She left the company 5 years later to found CoreRatings, a new rating agency. She was to become one of the members of the Foundation’s supervisory board for public innovation, then director of sustainable development for Eiffage in 2006 and Veolia in 2008.</td>
<td>Sal. → R.E. → G.E. → Sal. ? T&lt;sub&gt;E4&lt;/sub&gt;</td>
</tr>
<tr>
<td>Anita Roddick The Body Shop</td>
<td><strong>Offer completely ecological products</strong></td>
<td>A. Roddick was born into a family of Italian Jewish immigrants at Littlehampton, where she gained several years of experience in the hotel and restaurant business (owner and manager). Receptive to environmental values, e.g. recycling, and interested in discovering other cultures (many foreign trips), she opened her first Body Shop in Brighton in the South of England (1976), with the aim of providing natural treatments and products with a view to making enough money for her family to live on. The following success of the company would enable her to become a major activist for all social and environmental causes. More notably she was one of the pioneers in terms of fair trade with projects such as “Trade – Not Aid”. She also gives her support to NGOs who uphold the values she fights for (Greenpeace, les Amis de la Terre or Amnesty International for example).</td>
<td>Sal. → R.E. → G.E. → Su. E. T&lt;sub&gt;E5&lt;/sub&gt;</td>
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1 www.neilpeterson.com
<table>
<thead>
<tr>
<th>Entrepreneur &amp; Enterprise</th>
<th>Concept</th>
<th>Personal history and believes</th>
<th>Trajectory</th>
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</table>
| **Sulo Shrestha Shah**  <br> **Formation Carpets**  <br> Nepal | Create a productive and profitable company which takes care of children’s education and contributes to the emancipation of women in Nepal | Coming from a well-off family from Katmandu, Sulo Shah was able to study in Germany where she obtained her doctoral degree in mathematics. On returning to her country, she successfully integrated the national education system and non-governmental organizations, but each time the gap between her beliefs and values was too great for her to stay there. She no longer wanted to work for a boss and decided to create her own company, Formation Carpets, which would enable her to take more practical actions for her environment. After only 3 years, Sulo Shah’s hand-crafted carpet factory had taken on more than 60 employees, virtually all of whom were women from the poorest classes of society. She also systematically forbade child labor, contributing to the creation of an ethical label for the carpet making workshops. The profits from Formation Carpets allowed Sulo Shah to reproduce her model by buying similar companies and subsequently socially transforming them. | Sal $\rightarrow$ S.E.  
| **Olivier Peoples**  <br> **Metabolix**  <br> Cambridge  <br> United States | Use bacteria to produce plastic | O. People originally comes from the mining area of Aberdeen in Scotland, and from an early age his passion was biochemistry. He rapidly received his diploma in engineering before going on to teach and then to join the researchers from the Massachusetts Institute of Technology. MIT enabled him to devote himself to one single objective: to genetically modify an enzyme so that it would produce plastic (polymer). 20 years of research led to this discovery and consequently the creation of a start-up Metabolix (1992). He left MIT, who invested in the young business enterprise. 12 years later, thanks to a completely biodegradable plastic, biomaterials become known in the plastic industry. O. People continues to work for and support sustainable development. | Sal $\rightarrow$ S.E.  
| **Mike Hannigan**  <br> **Give something Back**  <br> Californie  <br> United States | Make profits to then donate them to humanitarian work | He studied at Berkeley where he obtained a diploma in sociology and also promoted her beliefs. Employed by Xerox as a debt collector, he quickly worked his way up the ladder, before being headhunted by a competitor to manage the administration and finances (Ricoh). Sacked for having refused a mission that went against his principles, he would defend himself in court against this redundancy and gain enough compensation to turn his situation around. Hence in 1991, he decided to go into partnership with Sean Marx to set up the project Give Something Back, a Californian mail-order company specialized in office supplies and equipment that donates 70% of its profits to local association and reinvests the other 30%. Today, despite his principal objective of satisfying the community, he makes sales of 21 million Euros. | Sal $\rightarrow$ S.E.  
| **Allen Chan**  <br> **Sino Forest**  <br> Hong Kong  <br> Chine | Stop deforestation by planting more trees which are cut down without trimming the profits | A. Chan is from Hong Kong, with a passion for Chinese art and culture. He studied sociology before going on to teach at university. However, he did not feel that he was reaching his full potential and decided to abandon everything to join a chain of restaurants and put his management skills into practice. In just a few years, he became a financial advisor, much sought after by foreign investors, notably from the hotel complexes sector. Unfortunately, the events in Tiananmen Square (1989) scared off his investors and his activity went downhill. In 1993, he got back on his feet and introduced a new concept of tree farms with Sino Forest, a real sustainable alternative to deforestation. | Sal. $\rightarrow$ R.E.  
|  |  |  | G.E.  
|  |  |  | $T_{E10}$  


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<thead>
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<th>Entrepreneur &amp; Enterprise</th>
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| **François Lemarchand**  
**Nature & Découverte**  
France                      | Allow Europeans to discover the different cultures in the world through the sale of natural, ecological and hand-made products | After completing his studies at the ESCP EAP and Harvard, he carried out a 3 month placement with “Pier Import”, a chain of home decoration stores from San Francisco that sold hippy style products. His mission was to close down the European stores (around 10 stores). He decided to buy them himself and to orientate them differently, but ended up reselling them all. For this reason, he embarked on the creation of Nature & Découverte with his wife, a job that suited him and in a domain that he had mastered; retail distribution. He was convinced that behaviors were changing and that tomorrow’s products had to be of good quality, durable, more recyclable, but also technologically advanced. His ecological activism would lead him to create the Foundation Nature & Découverte which finances a large variety of social and environmental projects. | Sal. → R.E.  
→ G.E.  
Sus. E  
**T**<sub>E9</sub> |
| **Tristan Lecomte**  
**Alter Eco**  
France                      | Enable underprivileged small farmers from developing countries to improve their revenues | T. Lecomte is the founder of Alter Eco, the leading brand in France for fair trade products. A graduate from HEC, he started his career working for a large multinational cosmetic firm as cost controller. In 1997, he left his job to create a NGO supporting local associations for development. In order to finance it, he decided to draw on the sale of fair trade products. However the means became the end result, and as of the following year, Alter Eco would open its first store in Paris. In order to work with small underprivileged producers, he had to sell large quantities to be able to pay them a fair price and foresee education, housing or health programs. The solution was to make “Alter Eco” the leading French brand of fair trade products to be sold in French supermarkets (Monoprix, Cora, Carrefour, etc.). He continues to travel the world to offer even more products, his concern being to support initiatives that conserve the environment such as reforestation. | Sal. → S.E.  
Sus. E  
**T**<sub>E11</sub> |
| **Suraiya Haque**  
**Phulki**  
**Dacca**  
Bangladesh                  | Offer company day-nurseries to emancipate women in developing countries | Suraiya Haque was born in Chittagong, the second largest city in Bangladesh. She was forced to leave school at the age of 16 and was pushed into becoming the wife of a family friend, 10 years older than herself. Called upon to follow her husband to Dacca the capital, she would refuse to hire a cleaning lady who was accompanied by her child. This meeting was decisive as, filled with remorse, it would give her the idea of setting up a day-nursery in the neighborhood. She succeeded in proving to each factory owner that a day-nursery was a profitable investment, by showing the increased efficiency of the women concerned (in terms of absenteeism, quality of work and productivity). In 1996, the firm Phulki would set up its first day-nursery in a friend of S. Haque’s organization. She managed to communicate her model to national ministers, while setting the example to other entrepreneurs and other countries. | Sal. → S.E.  
**T**<sub>E12</sub> |
| **Nick Moon**  
**Approtec**  
Nairobi  
Kenya                      | Manufacture agricultural equipment adapted to the small farms in the rural zones of Africa | N. Moon was born in Singapore to an Irish father and an English mother. He started off by creating a cabinet-making workshop with an associate, an activity which led him to reveal his talents to rich Londoners who were beautiful furniture enthusiasts. At the beginning of the 80’s, on an impulse, he decided to leave for a rural zone in East Kenya and taught villagers there the art of cabinet-making. In Nairobi he trained young people from the most insanitary slums and met Martin Fisher, an American engineer with whom he | R.E. → S.E.  
**T**<sub>E13</sub> |
wanted to put the world to rights, imagining solutions for the development of their adoptive country. The two men came to the same conclusion: 7 out of 10 Kenyans were farmers, and 9 out of 10 did not have electricity (the only way to improve irrigation and to capture ground water with pumps). Together they would develop a manual pump that was handheld and adapted to the majority of the farmers’ needs, at a price 3 times less than existing products and which they would sell through the company Approtec (pumps that are today distributed in several African countries).

| **Aloys Wobben**  
**Enercon**  
Allemagne | **Distribution of wind power**  
**At the age of 23, after passing the baccalaureate and a diploma in electrical engineering at the Oldenburg University of Applied Sciences (Germany), A. Wobben managed to convince Meinard Remmers to invest in a project for the construction of wind power systems. He experienced a first setback, which did not hold him back insofar as a few years later he founded Enercon (a company with just one secretary) and would work out of a furniture warehouse measuring less than 50m². Over the years, orders multiplied, making Enercon the second largest wind turbine manufacturer in the world. Today, he is still a brilliant inventor who continues to offer mass produced inventions contributing to the development of clean energy.**  
S.E. Tₑ₁₄ |
| **Gary Hirshberg**  
**Stonyfield**  
Londonderry  
United States | **Introduce biological food to American consumption habits**  
G. Hirshberg carried out his studies in the field of the environment after being confronted by environmental problems during his childhood and adolescence (as a world class skier). He took up a career as a naturalist guide in the United States and China, before joining, rather by chance, the new team of an organic agriculture training centre founded by Samuel Kaymen. The financial situation of the centre was a disaster. Gary and Samuel thought they would be able to solve it by selling Samuel’s yoghurts and for this reason decided to found Stonyfield in 1983 (with a loan from Catholic nuns). They wanted to be the model of a socially responsible firm by only using ingredients from organic agriculture. Unfortunately reality proved to be a lot more complicated and financial difficulties were recurrent despite the consumers’ plebiscite. It was not until 1991 that Stonyfield would make its first profits, enabling the firm to finance its development. Today it is the fourth manufacturer of yoghurts in the United states, renowned for its commitment to the environment.  
Sal.  
S.E. Tₑ₁₅ |
| **Thomas Dinwoodie**  
**Powerlight**  
Berkeley  
United States | **Transform the world energy model into a renewable energy model (solar)**  
T. Dinwoodie’s experience in the boy scouts taught him to love, respect and protect nature from an early age. He studied engineering then architecture and went on to join a research team at MIT where he his passion was solar energy panels (these were very expensive at that time). After this experience, and now back in an architect’s office, he thought up a project of making a tile capable of transforming solar power to produce electricity and consequently founded the company Powerlight. The investment by companies in more expensive tiles pays off after 10 years as they produce almost 30% of their energy needs (with a lifecycle of 30 years). T. Dinwoodie continues to develop this source of energy.  
Sal.  
S.E. Tₑ₁₆ |
DISCUSSION AND IMPLICATIONS

A central feature of our discussion is the concept of trajectory, behind hero models, such as Anita Roddick (Body Shop) or David Green (Aurolab). Based on sixteen well known personal stories, the results of the present work point out the existence of three main trajectories leading to social, green or sustainable entrepreneurship (with different implications and probably lessons to learn) : direct, indirect and sustainable trajectories. That does not mean that there is only three ways to follow. As the next figure shows, others trajectories are theoretically possible, but none have been identified in the personal stories exposed.

**Figure 3: The main trajectories in the entrepreneur evolution**

Direct trajectories concerned individuals making a career choice or being still students who have never experimented with entrepreneurship. Personal stories study seems to show that there is at least two specific contexts leading to this trajectory. Individuals choose to start a social or green business. In this case, what is important to explore are the push factors and their profiles. First evidences are consistent with the ideas that technical skills and knowledge

[Diagram of trajectories]
are factors leading more easily to direct trajectories and that early exposure to social or green environment can directly influence social or green business creation. But individuals can be constrained to start their own business (lose of job, unwillingness to accept new location, difficulty to get a first job, etc.) and the entrepreneurial project is social or green oriented in order to respect personal values and/or to exploit actual opportunities. It can explain that seven out of eight entrepreneurs with direct trajectories are social entrepreneurs (more opportunities and probably less difficulties to reach financial equilibrium).

**Indirect trajectories** are more complex, involving different steps in the building process of a social or green entrepreneur. Obviously, due to some barriers many entrepreneurs are not able to follow their desire of becoming a social or green entrepreneur. Theoretically, when social utility or environmental respect is viewed as important and essential as economic success and personal achievement, the evolution can be twofold: (a) the regular entrepreneur decides to migrate toward a new social or green activity (social or environmental purpose of the business); (b) the regular entrepreneur adopts a social economic model in the existing activity or try to modify it in order to be in line with green principles (social or environmental performance). However, while most of regular entrepreneurs can evolve following the two trajectories, favorable conditions need to be reached and economic constraints have to be considered and respected. That means that the entrepreneurial context requires a coexistence of economic and social or green objectives (“profit necessity” and “profit will” are two different approaches).

**Sustainable trajectories** are not the most usual ones. In our sample, it concerned only three entrepreneurs who are in capacity to develop social and green entrepreneurial projects. What is interesting when analyzing world important sustainable entrepreneurs (such as Allen Chan, Takao Furuno, Carlo Petrini, Tristan Lecomte, Olivier Peoples, etc.) are the different steps that each of them followed before being able to generate hybrid profit (economic, social and environmental values). Their respective experience seems to confirm that it is preferable and sometimes necessary, to construct solid backgrounds and convictions (experimenting managerial and/or classic entrepreneurial activities). Societal value creation associated to sustainable entrepreneurs is supposed more important and salutary than any other form of entrepreneurship. In this sense, we have to make efforts to establish a good comprehension of how sustainable entrepreneurs are born.

In a more general way, what is interesting from this point of view is to observe how the migration toward green entrepreneurship seems more complex to achieve (R.E. \(\rightarrow\) G.E.; N.E. \(\rightarrow\) G.E.). Only two out of the eleven entrepreneurs concerned by direct and indirect trajectories developed a green project. In our opinion, part of the explanation can be linked to the constraints of profitability and the difficulty to reach a financial equilibrium in the first years of existence. With a long lead time for securing a return on investment, Thierry Kazazian and Allen Chan faced for example resistance from investors, who are insisting on more economic considerations (rather on green orientation). Paradoxically, when we only consider sustainable trajectories, the three entrepreneurs concerned were green entrepreneurs. Does it mean that green entrepreneurs are more likely to adopt a social complementary orientation than social entrepreneurs with the green orientation? In our point of view, considering the potential implications, question deserves to be addressed.
CONCLUSION

Countries are exposed to demographic, environmental and social pressures, making necessary the introduction of specific support. As a result of the growing and proliferating interest and emphasis on entrepreneurship as the driving force to economic development and job creation, most of the policy makers have initiated public programs for entrepreneur and venture support. Unfortunately, detecting a would-be social, green or sustainable entrepreneur, early enough to give him the priority in regard to the societal value, is not an easy task. Knowledge is missing to achieve this goal. Therefore, in order to bridge this gap, the present research aimed to examine the entrepreneurial evolution of sixteen entrepreneurs having contributed to social changes and/or integrating environmental constraints in their entrepreneurial practices. In line with this objective, we underlined three main trajectories (respectively direct, indirect and sustainable trajectories) and tried to discuss the differences.

The objective was also to propose a methodological construct articulating the different types of entrepreneur and second to use it with several sustainable entrepreneurs (well-known in the world) for a better understanding of the role of their respective trajectories. Obviously, this research is a first step in addressing the question of entrepreneur evolution and it needs to be extended to better understand the profile of each entrepreneur (regular, social, green and sustainable). Therefore, in focusing on these trajectories, scholars will clearly contribute to develop an emergence model of sustainable entrepreneurs. In this sense, we consider this first study as a pretest for future researches on sustainable entrepreneurs.

Considering the importance that politicians, practitioners and researchers have placed upon entrepreneurs and new ways for entrepreneurship, investigating and teaching new opportunities at Universities and/or Business Schools, before the beginning of a concrete entrepreneurial process, can favorite new trajectories and increase the number of future sustainable entrepreneurs. We started to introduce this possibility in our lectures and had good returns for our students.

References


GEM (2010), *Global Report*.


Capital Structure of Information Technology Small Firms
Entering NewConnect Market in Poland\textsuperscript{1}

Agnieszka Kurczewska\textsuperscript{2}

The problem of the optimal financing is a leading topic of two main capital structure theories: static trade off theory and pecking order theory. Despite many research conducted for many years there is still no unequivocal answer which theory better explains the behaviour of firms and thus the relation between the level of indebtedness and profitability is still not clearly determined. The aim of the paper is to present and discuss capital structure of Polish information technology SMEs. The regression model of financial leverage is tested for IT firms entering NewConnect (NC), an alternative market for young, small and medium enterprises in Poland (OLS method). According to the results the financial leverage of IT firms entering NewConnect is determined positively by tangibility of assets and their size and is negatively related to their profitability. The econometric analysis proves the relevance of pecking order theory for researched group. According to the study IT firms entering NewConnect prefer equity than debt financing which is visible even before entering the market. NC creates possibilities to acquire capital for investments of start ups without involving in long-term debt financing. From the point of view of investor, the investment risk in IT firm listed on New Connect is not high.

Introduction

There is a permanent drive to improve the processes of finance management in each well organized company, despite its size, legal form, specialization or current financial situation. Among plenty of issues a company deals every day a lot of attention is paid on the effectiveness of obtaining and using of capital. To achieve rationale management of capital in a company its managers have to shape and evaluate consciously its capital structure, that is the relation between equity and debt financing. Each enterprise all the time balances between risk and profitability, seeking the capital structure that maximizes its value. In consequence, capital structure is very often understood as a compromise between higher profits for

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shareholders and profits for companies being result of using cheaper debt capital (Wilmowska and Wilmowski 2010). One of the biggest dilemma in theory of finance is the problem of an optimal capital structure. On the one hand most economists agree that a company should lead to its optimal capital structure, on the other one the question about existence of optimal capital structure is still open.

The problem of the optimal source of financing (its level and sequence of choice) is a leading topic of two main capital structure theories: static trade off theory (STO) and pecking order theory (POT), as well as an issue discussed when theoretical concepts of financial asymmetry or bankruptcy costs are discussed. Despite many research conducted for many years there is still no unequivocal answer which theory better explains the behavior of firms and thus the relation between the level of indebtedness and profitability is still not clearly determined. It is generally accepted however that positive relation between these variables legitimates static trade off theory, whereas negative one confirms the assumptions of pecking order theory. Particularly few research concerns capital structure of companies in Central and East Europe, as well as companies listed on alternative markets (meaning stock submarkets for small and medium sized enterprises). The paper matches these two gaps. It analysis the capital structure of SMES entering Polish new stock market – NewConnect. The empirical research embraces information and technology (IT) sector. The sector is selected because its undisputable innovativeness – it requires high capital investments, projects are usually associated with: high level of innovativeness, high risk and uncertainty, inability for quick market verification, difficulty in merits evaluation. As a result, research group embraces very special and selected group of companies: small and medium sized, young, innovative, and entering alternative market in Poland.

The aim of the paper is to present and discuss capital structure of Polish information technology SMEs entering NewConnect by testing static trade off against pecking order
models of capital structure.

The paper is divided as follows. First part describes theoretical framework connected with capital structure, the basis of static trade off and pecking order theory. In second one the determinants of capital structure (on micro and macro level) and their measurements are determined and described. Third section characterizes NewConnect market as a place where small and medium enterprises (preferably innovative) may search for equity financing. Fourth section is dedicated to methodological issues and fifth to the results of empirical work. The paper ends with conclusions.

**I: Capital Structure In Theory**

There are two leading and competing theories dealing with company’s capital structure: pecking order theory and static trade off theory.

- **Pecking Order Theory (POT)**

  The fundamentals of pecking order theory were created by Donaldson in 60ties of XX century, however it was greatly developed by Myers and Majluf in 80ties. According to POT, in a long term perspective, the companies present some preferences for particular forms of financing (equity versus debt capital) and thus for particular financial instruments (chart 1). As a first and basic source of financing they choose retained profits (retentions) so they decide on internal way of financing. If these resources are not enough companies next opt for debt financing (credits and loans). The least preferred option is external equity financing (emitting shares). This logics of hierarchy is justified by the fact that self-financing generates lower costs (compared to external financing) and in its consequence there is no external limits for company’s functioning (Myers and Majluf 1984). Using external sources of financing very often means giving in the discipline and rules of capital market (Nawrot 2007). The supremacy of debt financing over external equity financing is based on its results – the only
commitment in debt financing is the repayment of debt, the managers (owners) do not pay personal losses and do not lose control over a company (Cobham 1999). The aim of a company is not achieving optimal capital structure but gaining less costly sources of financing. Recapitulating, according to pecking order theory, a company unable to use self-financing should decide on following sequence of external financing (Nawrot 2007):

1. Trade credit,
2. Bank credit,
3. Bonds,
4. Hybrid instruments (for example convertible bonds),
5. Shares.

In line with pecking order theory a company giving higher profits is less indebted because it has more possibilities to use internal sources of financing. Less profitable company needs external financing and in a result increases its debt (Mihalca and Antal 2009).

CHART 1.

SEQUENCE OF CHOICE OF FINANCIAL SOURCES ACCORDING TO POT.

<table>
<thead>
<tr>
<th>SELF-FINANCING</th>
<th>DEBT FINANCING</th>
<th>EXTERNAL EQUITY FINANCING</th>
</tr>
</thead>
</table>

The capital structure is set in a way that enables to limit ineffectiveness of investment decisions taken by a company in a circumstances of information asymmetry (Gajdka 2002). However, the pecking order theory does not explain all determinants of company’s capital
structure, it does not take into consideration tax shield, bankruptcy costs, or costs related to securities emission (Gajdka 2002). As Paranque (1999) claims, the companies are conscious about advantages and disadvantages of particular forms of financing, but logics of their behavior is very often the result of imperfect markets.

*Pecking order theory* is very often perceived as a more binding for small and medium sized enterprises as smaller firms have more difficulties in accessing external financing sources.

- **Static Trade Off Theory (STO)**

The basis of *static trade off theory* was established by Modigliani and Miller in 1958. As a name of the theory suggests it assumes static capital structure of a company. It is based on a constancy of capital and assets in a company (Grzywacz 2008). *Static trade off* theory assumes that there is optimal, predefined capital structure that company tries to follow. It presumes that company determines a debt target ration and then moves towards achieving it. The tax profits being result of company’s indebtedness cause that company is incurring a debt. According to STO each firm aspires to achieve its own optimal level of indebtedness, and that implies necessity to set a proportion between tax profits (being a result of debt) and costs of possible financial problems (bankruptcy costs). A company is using financial leverage to attain optimal capital structure and is seeking such a capital structure that maximizes firm’s value. The risk connected with debts is compensated by tax profits. The company decides on compromise between savings from debts and their costs. *Static trade off* theory assumes that big companies, obtaining substantial fixed assets are more willing to borrow money, than small firms which are characterized by higher risk of functioning and mainly current assets. Companies having valuable assets, smaller portfolio of investments and less volatile financial results are distinguished by higher financial leverage (Mihalca and Antal 2009). The differences between POT and STO are presented in table 1.
The interdependence between capital structure and its determinants is not obvious. When a relation between profitability of a firm and its indebtedness is discussed, it is usually assumed that positive correlation between these variables testifies *static trade off theory* whereas negative one legitimates *pecking order theory*.

The second dilemma concerns the structure of assets. The direction of influence of assets on firm indebtedness is also not clearly evident. If a structure of assets is expressed by relation of tangible assets to total assets, the companies achieving higher value of this coefficient are more indebted as costs related to debts are lower due to possible collaterals. Companies with high level of tangible fixed assets should incur more debts in that case, but on the other hand high level of tangible assets in total assets may mean that a company uses internally worked out profits (retained profits) and does not have to look for external sources of financing. It is difficult to determine undeniably the influence of assets’ structure on company’s finance, but assets are undoubtedly the factor that greatly determines financial possibilities and perspectives of a firm (Frank and Goyal 2003).

**TABLE 1.**

**DIFFERENCES BETWEEN STATIC TRADE OFF AND PECKING ORDER THEORY.**

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>STO</th>
<th>POT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital structure</td>
<td>Determined and predefined.</td>
<td>Established via financial decisions made according to hierarchic order.</td>
</tr>
<tr>
<td>Optimal capital structure</td>
<td>Exists and is targeted.</td>
<td>Does not exist in long term – company does not follow it.</td>
</tr>
<tr>
<td>Basic assumption</td>
<td>Company pursues for optimal capital structure.</td>
<td>Asymmetric information influences financial choices of companies.</td>
</tr>
</tbody>
</table>
Debt level | Reaches the level at which compromise between tax profits and debt costs is achieved. | Is a result of preference of financing.

Previous studies provide different results on capital structure. Despite many research conducted during last years there is no definite agreement which theory – POT or STO - is more valid to explain financing processes in a company. The two most famous and frequently quoted works are done by Shyam-Sunder and Myers (1999) and Frank and Goyal (2003). However Shyam-Sunder and Myers support *pecking order theory* whereas Frank and Goyal find *static trade off theory* more relevant.

**II: Determinants Of Capital Structure**

Typologies of capital structure determinants may be built on different criteria. The most natural seems to be a division based on source of the determinants. According to it, factors influencing capital structure may have external character (exogenic), being domain of macroeconomics, and internal one (endogenic), constituting the field for research of microeconomics. The former are mostly the result of economy development and existing financial system and law system. They are independent from financial strategy and decision of a single company. Their set, due to objective character, may be called environment of a company. Internal determinants of capital structure are related to functioning of a particular company, its character, taken decision and perspectives of growth. On these group of factor entrepreneur (manager) has a clear influence, as they are dependent on company’s financial policy and its market strategy and thus affecting capital structure.
From the point of view of microeconomics the capital structure of a company is usually determined by following factors:

- Size of a firm,
- Sector,
- Cost of capital,
- Liquidity,
- Level of risk acceptance,
- Perception of company’s position on market,
- Tangibility of assets
- Profitability of a firm,
- Dividend policy,
- Investment strategy;

This set of factors was used to test capital structure of firms functioning on highly developed markets (Rajan and Zingales 1995, Hall, Hutchinson, and Michaelas 2004) and on developing ones (Booth et al. 2001), for small and medium sized enterprises (Zoppa and McMahon 2002; Heshmati 2001; Michaelas, Chittenden and Poutziouris 1999) as well as for big companies (Rivaud-Danset, Dubocage, and Salais 1998). The capital structure of big quoted firms was a topic of research for Demirgüç-Kunt and Maksimovic (1995) or Welch (2004).

From macroeconomics point of view the capital structure is shaped by external factors, on which single company does not have any influence (Antoniou 2002). They include:

- Level of country’s development in which company operates,
- Fiscal policy,
- Monetary policy
- Law regulations,
• Size and effectiveness of banking sector,
• Level of technology accessible in a country,
• Level of development of financial markets;

In order to build a model of capital structure its determinants have to take form of measurements. The examples of various measures of selected determinants are presented in table 2. As the paper concerns companies existing on Polish market, and they all encounter the same macro conditions, only selected measurements of micro level determinants are included in the table.

TABLE 2.
MEASUREMENTS OF SELECTED DETERMINANTS OF CAPITAL STRUCTURE

<table>
<thead>
<tr>
<th>DETERMINANTS OF CAPITAL STRUCTURE</th>
<th>MEASUREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Structure of assets</td>
<td>quotient between the tangible assets and total assets,</td>
</tr>
<tr>
<td>• Profitability of assets</td>
<td>quotient between EBIT and total assets,</td>
</tr>
<tr>
<td>• Perspectives for growth</td>
<td>- changes in assets value (%),</td>
</tr>
<tr>
<td></td>
<td>- changes in sales (%),</td>
</tr>
<tr>
<td></td>
<td>- quotient between long term investments and total assets,</td>
</tr>
<tr>
<td></td>
<td>- quotient between the intangible assets and total assets,</td>
</tr>
<tr>
<td>• Liquidity</td>
<td>quotient between current assets and current liabilities,</td>
</tr>
<tr>
<td>• Size</td>
<td>- the natural logarithm of net sales,</td>
</tr>
<tr>
<td></td>
<td>- the natural logarithm of total assets,</td>
</tr>
<tr>
<td>Sector</td>
<td>quotient between cost of sales and profits from sales,</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Default risk</td>
<td>quotient between interest expenses and earnings before interest and tax (EBIT),</td>
</tr>
<tr>
<td>Non–debt tax shields</td>
<td>quotient between depreciation and assets,</td>
</tr>
<tr>
<td>The effective tax rate</td>
<td>quotient between tax paid and earnings after interest and before tax;</td>
</tr>
</tbody>
</table>


Debt ratio is usually measured as a relation of total debt to total assets or quotient between total debt and equity.

**III: NewConnect Market**

In August 2007 Warsaw Stock Exchange created an alternative trade system NewConnect, a new market for small and medium enterprises. NC is a financial platform and a vehicle of investment, playing role of entrepreneurship incubator for young, dynamically developing firms, mainly from perspective sectors (ICT, biotechnology, advanced manufacturing, electronic media, alternative energy or environment protection). From the debut till mid of April 2010, 124 firms have been already quoted on NewConnect and the NC capitalisation reached the level of 3361 million zlotys. To be quoted on NewConnect an issuer is obliged to have appropriate legal status (joint stock company or a joint-stock limited partnership company) and to guarantee unlimited transferability of shares. An appropriate information document has to be prepared and cooperation with Authorised Adviser or Market Animator ensured. NewConnect is designated for small and medium enterprises seeking a source of financing from several hundred thousand zlotys to several million zlotys. The entry criteria, formalities and costs are more lenient than for regular stock exchange.
NewConnect is one of ten alternative markets associated in FESE (Federation of European Securities Exchanges), which includes: ENA (Athens), Entry Standard (Frankfurt), Alternext (Euronext), IEX (Dublin), AIM (London), MAC (Milan), First North (OMX), Axess (Oslo) and Dritter Markt (Wien). Taking into consideration number of quoted firms, NC takes fifth place.

The main characteristics of NewConnect are:

- It is a source of financing for young, small and medium sized enterprises (usually functioning on the market no longer than three or four years),
- Expected capitalization of quoted firms is minimum maximum 20 million zlotys (approximately 5 million euro),
- It is designated for enterprises with a capacity to expand and perspectives for dynamic growth,
- The companies and their projects are characterized by higher than average investment risk,
- It is based on idea of mid- and long term investments, not short-term gains,
- It enables a company to be transparent, recognizable and visible on market,
- It softens an entrance on regular stock exchange in future and accustom with public capital markets;

NewConnect was established with the view that mainly innovative firms will be listed, however at present it is visible that many SMEs operating in traditional sectors are allowed to enter the market.

**IV: The Methodology**

The aim of the paper is to present and discuss capital structure of Polish information technology SMEs planning to use equity financing to reach their growth intentions. The
regression model of financial leverage is tested for IT firms entering NewConnect, an alternative market for young, small and medium enterprises in Poland (Ordinary Least Square method). The research group consists of all 11 IT firms entering New Connect from August 2007 (the debut of the market) till the end of March 2010. In proposed regression model the leverage (measured as the ratio of total debt to total assets) is determined by:

- profitability of a firm (measured as a relation of gross profit to total assets),
- tangibility of assets (measured as relation of tangible fixed assets to total assets),
- size (measured by the natural logarithm of total assets).

This set of determinants, plus growth perspectives factor, was used by Harris and Raviv (1991), Rajan and Zingale (1995) and Booth et al. (2001). However, growth perspectives is not included as all firms entering NC are regarded as high growth ones (an interesting fact is that vast majority of them have zero long term investments while entering the market). Taking into consideration theoretical output, two alternative hypotheses are made:

**H1:** Pecking order theory explains the behavior of companies entering NewConnect if:

- a relation between debt ratio and profitability is negative,
- a relation between debt ratio and tangibility of assets is positive,
- a relation between debt ratio and size is negative,

**H2:** Static trade off theory explains the behavior of companies entering NewConnect if:

- a relation between debt ratio and profitability is positive,
- a relation between debt ratio and tangibility of assets is positive,
- a relation between debt ratio and size is positive,

The expected relations between leverage and its determinants are presented in table 3.
TABLE 3.
DETERMINANTS OF CAPITAL STRUCTURE AND THEIR INFLUENCE ON A
FIRM’S INDEBTEDNESS ACCORDING TO POT AND STO.

<table>
<thead>
<tr>
<th>DETERMINANTS</th>
<th>PECKING ORDER THEORY</th>
<th>STATIC TRADE OFF THEORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Tangibility</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Size</td>
<td>+/-</td>
<td>+</td>
</tr>
</tbody>
</table>

Following regression model is proposed:

$$L_{i,t} = \beta_0 + \beta_1 \text{PROFIT}_{i,t} + \beta_2 \text{SA}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$L_{i,t}$ - leverage (measured as the ratio of total debt to total assets),

$\text{PROFIT}_{i,t}$ - profitability of a firm (measured as a relation of gross profit to total assets),

$\text{SA}_{i,t}$ - tangibility of assets (structure of assets measured as relation of tangible fixed assets to total assets),

$\text{SIZE}_{i,t}$ - size (measured by the natural logarithm of total assets),

$\beta_0$ the intercept,

$\varepsilon_{i,t}$ the random error term.

All data used in a research are extracted from published financial statements available on NewConnect website. They cover financial data of a whole financial year preceding a debut on NewConnect market. The data are book value. To avoid heteroscedasticity problems the variables are deflated by total assets value (Buferna, Bangassa, and Hodgkinson 2005).

V: Results
The results lead to the following form of function:

\[ y = -0.94976 - 0.16553 \times \text{PROFIT} + 2.70237 \times \text{SA} + 0.084677 \times \text{SIZE} \quad (2) \]

\( \beta_1 < 0 \) (profits are negatively correlated to leverage)

\( \beta_2 > 0 \) (the higher the share of tangible fixed assets in total assets, firm has more collateral possibilities, so the level of debt may be higher)

\( \beta_3 > 0 \) (bigger firms tend to be more indebted as they have better reputation among creditors)

Detailed results of OLS regression and statistical descriptions of the model are put in table 4 and 5 respectively.

**TABLE 4.**

RESULTS OF ORDINARY LEAST SQUARE REGRESSIONS.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibility</td>
<td>2,7024</td>
</tr>
<tr>
<td>Size</td>
<td>0,0847</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0,1655</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0,9498</td>
</tr>
<tr>
<td>( SE )</td>
<td>0,124</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0,713</td>
</tr>
<tr>
<td>( F )</td>
<td>5,805</td>
</tr>
</tbody>
</table>
TABLE 5.
OTHER STATISTICAL DESCRIPTIONS OF LEVERAGE MODEL.

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>REGRESSION COEFFICIENT</th>
<th>ELASTICITY</th>
<th>T-STATISTICS</th>
<th>LEVEL OF SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0,9498</td>
<td>-1,858</td>
<td>0,106</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>-0,1655</td>
<td>-0,1842</td>
<td>-2,726</td>
<td>0,030</td>
</tr>
<tr>
<td>Tangibility</td>
<td>2,27024</td>
<td>0,4101</td>
<td>3,582</td>
<td>0,009</td>
</tr>
<tr>
<td>Size</td>
<td>0,0847</td>
<td>3,6307</td>
<td>2,411</td>
<td>0,047</td>
</tr>
</tbody>
</table>

The function (2) shows that financial leverage of IT firms entering NewConnect is determined positively by tangibility of assets and their size and negatively by their profitability. The model indicates thus more relevance of pecking order theory for firms entering NewConnect market. The more profitable the firm, the less debts it incurs.

All used independent variables explain the debt ratio determinant. The correctness of a model was evaluated by:

- Coefficient of determination – measuring goodness of fit - the adjusted R-squared is at 71,3 percent, which may be evaluated as satisfactory.
- the Jarque Bera test for normality – checking whether data are form normal distribution – the test proves that data have normal distribution (the J-B test for the sample is 0,016 so much lower than critical value 5,99). The regression model may be used to estimate capital structure.
- T-student test – checking the significance and consistency of parameters of a model - T statistic results are satisfactory, all explanatory coefficients, except intercept, reach higher
level than critical one, which is 2,365. All the coefficients are statistically significant at the level of confidence of 95 percent.

- The F-statistic proves the validity of the estimated model. The regression model may be used to estimate capital structure.

The results show that tangibility is positively related to profitability while profitability has a negative relationship with size and leverage. This may lead to the conclusion that smaller firms tend to have higher profitability, whereas profitable companies tend to have more tangible fixed assets. The negative relationship between profitability and financial leverage seem to signal the relevance of pecking order theory.

**Conclusions**

According to the results, the financial leverage of IT firms entering NewConnect is determined positively by tangibility of assets and their size and is negatively related to their profitability. An empirical evidence supports the relevance of pecking order theory for researched group. According to the study, IT firms entering NewConnect prefer equity than debt financing. Especially long term debt financing is not popular among tested group. It leads to the conclusion that NC creates possibilities to acquire capital for investments of start-ups without involving in long debt financing. From the point of view of investors, the investment risk in firm listed on New Connect is not high.

The study contributes to the global discussion on capital structure of a firm by including data on Polish companies, precisely Polish IT SMEs entering NewConnect. It gives an information to IT firms about their capital structure and in some way may help them to chose a proper strategy of development. Results may have an influence on development of NewConnect market. Knowledge of financial specificity of firms entering this market will
contribute to better understanding of NewConnect mechanisms not only for firms but for all market participants: investors, market makers and animators, authorized advisors.

The aim of the article was to test two competing capital structure theories and to determine capital structure of Polish IT firms. It seems that *pecking order theory* provides better explanation of capital structure of Polish IT firms entering on NewConnect market. However, for more general conclusions, further research, embracing other sectors is needed.
Bibliography:


Insights Into the Determinants of Family Business’s Succession

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Abstract

Family owned businesses in Germany are regularly confronted with creating and conducting a sophisticated succession plan. According to Mahnke (2005) less than 30 percent of the active entrepreneurs have prepared a succession plan. Especially, the wish of current company owners to take the offspring into responsibility (Kaushik, 2009) is often encountered by the unwillingness by the offspring (Leach & Bogod, 1999) due to the far-reaching consequences for them (Krüger, 2006).

Within this study the focus is laid on family owned businesses that have already undergone a succession. Hence, companies that are run in the second or a later generation were addressed. The respondent had to fulfill in addition the criteria of being the manager (respectively Chief Executive Officer) of the company and being an offspring of the former manager. Hence, fostering and inhibiting factors in the succession phase are undisclosed and analyzed.

As research instrument a quantitative study was conducted and 75 successors completed the questionnaire.

* Corresponding author
Introduction

Family-operated small and medium enterprises (SMEs) are responsible for two out of three jobs in Germany and generate almost two billion Euros of annual sales (IFM Bonn 2009). With a percentage of 95 percent of the total number of companies, 40 percent of sales, and 50 percent of employees, their influence on the economic power of the country is very high (Hauser and Wolter 2007; Röhl 2008), and their national and international significance is considerable (Alcorn 1982; Pichler and Bornett 2005).

Since many of these businesses have changes forthcoming, they need to take extensive efforts to find successors (Wiese 2003). In the past, a clear wish to keep the business in the hands of the family and to have the owner's children take over operations, if possible, could be seen in most companies (Kaushik 2009). However, this trend has been declining over the past few years (Düben et al. 2006), since heirs nowadays are not automatically willing anymore to take over succession (Leach and Bogod 1999). This creates the existential problem for businesses of not being able to find a successor (Hölper 2007).

Planning the business succession, however, is often adjourned (Mahnke 2005), since the thought of retiring from one's own company is often suppressed by the passing entrepreneur for as long as possible (Rietmann 1988). For successors, however, the takeover is often a step into self-employment that has far-reaching consequences. Not only do they take over responsibility for the affected business, but also for its employees and – indirectly – for their families as well (Krüger 2006). In the past, the specific challenges from the successor's point of view were only rarely pointed out and were mostly concerned with fiscal and civil law issues. The present study therefore focuses on successors of small and medium-sized German family businesses and their personal experiences, opinions, and assessments. It is also to be shown which factors can be drawn upon as indicators for a successful transition and continuation of the business.

Theoretical Background

Family Businesses

The term "family business" emerged from everyday language and evades a standardized definition (Färber 1993; Wimmer et al. 1996). Family businesses are owner-managed, this means that the entrepreneur provides capital on one hand but also carries the business risk
(Fasselt 1992). In a family business in the narrower sense, at least 50 percent of the company shares are distributed between up to two natural persons or their family members (Flören 1998). Therefore, the majority of the business must be owned by one or more persons (Becker and Tillman 1978) that share family relations and have the will to keep the business restricted to their circle, also for the future, and follow family goals (Bertsch 1964; Hengstmann 1935; LeMar 2001; Trefelik 1998).

**Business Succession**

When handing over a business, the first question to be dealt with is whether the union of ownership and management in the hands of the family should be preserved (Krüger 2006). Should this be the case, the first distinction concerns the one between internal and external transfers. The external solution is chosen if the 'life's work' of the entrepreneur is to be preserved, despite the lack of a suitable successor (Seeghitz 2000). This may happen gratuitously, as a donation or inheritance. In practice, however, the option of a remunerated transfer to family outsiders is used far more frequently (Deimel and Zacharias 2008), for example as a management buyout by employees that already work for the company (Lüders 2008), or as a management buy-in by managers outside the company, or selling the company to investors (Seeghitz 2000). In the long run, however, the continuation of the company as an independent entity is not ensured in such cases (Lüders 2008). For this reason, the option of discontinuing the business needs to be mentioned as an additional succession plan, in contrast to the goal of securing business continuity postulated by Albach and Freund (1989). The second way of securing continuity and the union of ownership and management is an internal transfer to family members (Bechtle 1983). Here too, the different options of the aforementioned remunerated and gratuitous solutions for third-party succession are to be distinguished (Groschoff and Koming 2008).

The subject of this paper is the family-internal succession plan, since it not only represents the favored solution (Hasch et al., 2000) but is, in the form of management buyouts (Schütz and Kahl 2008), also the most frequently used method in Germany, with 43 percent of all cases (Wallau 2008). A family-internal succession plan hereafter refers to the process of transferring management and controlling functions as well as financial responsibility for a company to the next generation (Freiling and Gersch 2007; Gerke-Holzhäuer 1996; Handler 1989; Olbrich 2005; Spielmann 1994). A generational change in the form of a personal change needs to have occurred in this case at least (Fasselt 1992). Two basic possibilities are
conceivable: Either the senior retires from his management position as planned, for example, for reasons of age (Fasselt 1992), or the transition is initiated suddenly, for example, by an emergency due to a serious illness of the business owner (Spielmann 1994).

The aim of a successful transfer is to permanently secure the continuity of the business (Becker and Stephan 2001). Next to economic and family-related goals, personal goals of the company owner, like providing for the entrepreneur and his family after his retirement, avoiding claims to the estate, or fragmentation are also pursued (Deimel and Zacharias 2008). These controversies often result in a hazardous area of conflict that the owner is required to handle (Smeja 2006; Stephan 2002).

**Determinants of Success in the Handover Process – State of Research**

According to Diegruber (1991), next to the owner and his family, the company and the environment are crucial for the success of the succession process.

Based on the sources of success mentioned above, the success factors will be examined in the statistical analysis of the survey, using the factors collected from the academic literature. The perspective of the successor will be retrieved here. The attempts at explanation found in the literature deal with economic indicators, like the increase in value, growth, returns, and profit on one hand and, on the other, with subjective personal criteria that focus on the individual. Since the former component is already analyzed in scientific literature, the present paper will place a stronger emphasis on the latter to address an existing research gap. Weinläder (1998), furthermore, argues that, a satisfactory solution cannot be reached without it. Therefore, a generational change will be labeled as successful hereafter if the independent continuity of the business was secured and the personal goals of the owner were achieved (Spielmann 1994). In order to accomplish this, the following determinants are to be seen as decisive for the success of a succession plan.

**Minimum Size as a Basic Requirement**

The first basic requirement to make a change possible at all is that the business to be transferred must have a minimum size in order to seem sufficiently attractive to the successor (Hölper, 2007)
Personal Factors

Another important aspect is the human factor, which is a prerequisite for a promising continuation of the business. However, this factor is often neglected when speaking of a successful transfer (Becker and Tillman 1978). It primarily refers to the personalities of the transferor and the successor, which have a decisive influence on the transition process and a successful continuation of operations. In this case, the senior needs to be willing and ready to retire and transfer the business (Risak and Nagy 1999; Schröer and Freund 1999). In many cases there is a lack of awareness for the necessity of a succession plan, or the fear of retiring obstructs the transfer (Wimmer 2007). However, one fact that most entrepreneurs are fully aware of is often disregarded – that a bad succession plan is still better than no plan at all (Klughardt 1994). Consequently, the basic requirement for a successful transfer is that the parting entrepreneur deals with separating himself from a task that previously filled up his own life.

Next to a willingness to retire on the part of the senior, the junior is also required to have a firm will of his own. Next to qualities that can be learned, like the right qualification and experience, as well as personal prerequisites like competence, flexibility, leadership traits, and creativity, an entrepreneur also needs a strong will that enables him to face challenges (Risak and Nagy 1999; Spielmann 1994; Vorwold 2001).

An excellent level of education and professional skills, combined with good on-the-job training by the senior are further determinants for the successful continuation of a family business (Schröer and Freund 1999). Oftentimes, business skills like management knowledge are named as a central factor for success in the literature (Szyperski and Nathusius 1977; Voigt et al. 2006). Next to the factor of knowledge, a family business also draws upon the personality of the entrepreneur himself for its corporate culture (Vorwold 2001). Key factors that a prospective successor should possess are primarily emotional intelligence, knowledge of human nature, and entrepreneurial thinking (Kronz 2008). Strong leadership, a sense of responsibility, and the ability to motivate are also required (Hennerkes 2004).

Next to those directly involved, the family as an influential factor also deserves to be emphasized (Brockhaus 2004; Hennerkes 2004). It decisively contributes towards achieving
success by providing assistance and emotional support, especially in emotional situations (Risak and Nagy 1999).

If, next to the family, competent advisors are also included into the complex task of planning and realizing the transfer, the larger variety of skills will increase the probability that all areas to be observed will be sufficiently integrated into the process. Albach (1984) holds the position in this regard that family members should not take advisory functions since they lack the necessary detachment to assess the company situation and circumstances without bias and without emotionality. Advisors may act as conflict solvers and maybe avert crises in case of deadlocks by taking the position of an impartial referee and inspire an exchange of thoughts (Gerke-Holzhäuer 1996). This improves chances of making the succession plan a success (Bachmann and Liebernickel 2000).

**Organizing the Generational Change**

Next to personal criteria, the organizational factors are also to be mentioned as variables with an influence on overall success. In order to ensure long-term business continuity even after the retirement of the senior entrepreneur (Ward 2004), early, preventive, and detailed planning is a very important factor (Heß 2008; Kaushik 2009; Lea 1991).

An anticipated succession may underline the senior entrepreneur's consent to the change during his lifetime and therefore lead to increased acceptance of the arrangement with the family and employees (Gratz 1997). It also facilitates the prevention of inheritance disputes, since the legal and fiscal conditions of the transition and the transfer of assets can already be settled in advance (Horster 1999; Hutcheson 2007; Vorwold 2001). The time, circumstances, and duration of the transfer also have an influence on the success of the generational change (Alcorn 1982). Putting aside the possibility of an unforeseeable exit of the senior, the right time depends on the conditions of the business as well as the expectations and leadership skills of the current senior director (Hess 2006). An abrupt, unplanned generational change creates high risks for want of preparation on the part of the successor, a lack of acceptance of the generational change by the employees, or due to the predecessor not being able to provide counsel and support anymore (Risak and Nagy 1999). A planned generational change provides the opportunity to be proactive instead of just reacting (Spielmann 1994). Furthermore, the employees have the opportunity to better adapt to the new situation and the
new boss (Seeghitz 2000). A good organization of the generational change can therefore contribute towards lowering the potential risks and allows the junior and the senior to better realize the succession plan (Horster 1999).

**Research design**

The study was conducted between April and June 2009 as a quantitative, written survey. Therein, successors in family businesses were asked to participate. To increase the probability of participation the questions were asked in an anonymous way and the questions were limited to the utmost possible (Wübbenhorst and Wildner 2007). The addresses were acquired randomly to strengthen the representativity (Kromey 1986).

Based on an extensive literature research hypothesis were developed. The operationalisation of the variables followed especially the studies of Freund and Kayser (2007), Schlömer and Gude (2008); Schlömer and Kay (2008); Spielmann (1994); Schlömer et al. (2008) and Terwey et al. (2006).

A pretest was conducted by 48 people to ensure the quality of the questionnaire. Meaning, understanding and scales of the items illustrate the main aspects of the pretest (Schnell et al. 1999). The final questionnaire contains 30 questions which are grouped in thematic blocks.

The analysis was carried out with help of a descriptive, multivariate procedure (Backhaus et al. 2008). The analysis followed and was restricted by the chosen scales of the variables of the questionnaire (Fürtjes 1982; Green and Tull 1982). The hypotheses are examined with correlations and regression analyses. For variables with interval scale and Gaussian distribution a Pearson correlation was used, while for ordinal scaled or not equally distributed variables the Spearmen method was chosen (Bourier 2005). Causal relations were examined with a regression analysis (Backhaus et al. 2008). Following Albach and Freund (1998) the statistical significance is categorized into \( p \leq 0.01 \) as “strongly significant”, \( 0.01 \leq p \leq 0.05 \) as “significant” and \( 0.05 < p \leq 0.10 \) “slightly significant”.

Based on the prior shown literature overview following main research aim was derived.
**Research aim**

Is there a correlation between the satisfaction of the succession success and the satisfaction with the companies’ further development with the circumstances, the prerequisites and the condition of the generation change?

Following variables result from that research aim:

- satisfaction with the succession success (DV₁)
- satisfaction with the companies’ further development (DV₂)

Hence, the research hypotheses within this study are:

Hypothesis 1: Socio-demographic attributes have an impact on the perception of satisfaction with the succession success and the further development of the company.

Hypothesis 2: There is a correlation between the way in which the generation change occurs and the perception of the satisfaction with the succession success and the further development of the company.

Hypothesis 3: The predecessor influences the perception of satisfaction of the succession success and the further development of the company.

Hypothesis 4: The qualification and experience of the successor influences the perception of the satisfaction with the succession success and the further development of the company.

**Descriptive Findings**

Within this study 75 successors participated. The percentage of women is 17.3 percent which corresponds with the overall number of women in Germany in top management positions. 48 percent of the participants are between 30 and 44 years old, while 9.3 percent are younger than 40 years. 48 percent are between 30 and 44 years old and 34.7 are in the age between 45 and 59. Only eight percent are at least 60 years or older. Regarding the educational background, 24 percent of the respondents have achieved an academic degree. 24 percent finished an apprenticeship. Eight percent have an A-level 17.3 percent have chosen the option “others”. The majority of those 17.3 stated to have a master craftsmen diploma.
The successors run a business which belongs mainly to the group of small businesses. 41.3 percent of the companies have less than two million Euro turnover and less than 10 employees. 37.3 percent of the enterprises have less than 50 employees and earned as much as ten million Euro. 21.4 percent have a revenue 50 million Euro and 250 employees maximal.

**Analysis of the Correlations**
Based on the analysis, a normal distribution of the variables is assumed.

**Influence of Socioeconomic Characteristics**

**Research Hypothesis 1:** Socio-demographic attributes have an impact on the perception of satisfaction with the succession success and the further development of the company.

The factors of educational and family background, unlike age and gender, do not show a metric, but merely a nominal scale measurement. Due to a lacking natural sequence of the criteria, neither a correlation analysis nor a regression analysis delivers interpretable results for the variables of educational and family background. Therefore, the examined correlation with satisfaction regarding the success of the transition and company development can only be presented in cross tabulations and verified using the $\chi^2$ test. This findings show, that satisfaction generally increases with the educational background. An exception illustrates people with a master craft’s men diploma whose satisfaction exceeds those with an A-level or an academic degree. Married respondents varied most strongly in their evaluation, while singles tended to be rather satisfied, and divorcees were also mostly in the medium range, i.e., the neutral expression represented the mode. Middle-aged people rated success of the transition and development of the business succession more negatively than people under 30 or over 60 years of age. Women rated satisfaction with the development of the business succession slightly more positively than men and are more likely to be satisfied with the success of the transition. However, these are only tendencies, since the values do not prove to be significant after being verified using the $\chi^2$ test.

Surprisingly, when analyzing the metric criteria, there is no correlation of the analyzed criteria when verifying the criteria of age and gender according to Spearman (Heckmann 2009). The linear regression of the variables does not yield any results that can be reasonably interpreted.
either, which collectively leads to a rejection of the alternative hypothesis. This means that there is no significant correlation between the socioeconomic criteria of the participants and satisfaction with the success of the transition and the development of the business. This is very surprising, since clear significances were to be expected especially in relation to human capital and gender (Heckmann 2009). The assumption stated above can therefore not be confirmed for the present sample. For this reason, the research hypothesis is to be rejected in favor of the null hypothesis.

Implementing the Generational Change

In the further development of the task at hand it was examined if there is a causal relationship between the implementation of the generational change and the satisfaction with the success of the generational change or the development of the business. For this, the criteria of the decision about the time of accession, duration of the transition, the required help for assessment and support, steps of the transition, conditions, and satisfaction with the time of the transfer were examined more closely on the basis of the following research hypothesis.

Research Hypothesis 2: There is a correlation between the way in which the generation change occurs and the perception of the satisfaction with the succession success and the further development of the company.

First, the cross tabulations of all according variables are examined and tested for two-sided significance using Pearson's chi-square test. Significant values occur in three cases. Significant correlations with regard to satisfaction can be observed between the assessment of the satisfaction with the time of the transfer ($\chi^2=42.870; \ p=0.014$) and the satisfaction with the business succession ($\chi^2=34.379; \ p=0.024$). The same goes for the correlation between satisfaction with the success of the transition and the circumstances of accession ($\chi^2=35.864; \ p=0.016$).

In the next step it is examined if there is a correlation between the examined metric variables. The calculation according to Spearman does not indicate that independent variables have any significant influences on the observed dependent variables of satisfaction with the success and satisfaction with the development of the business, however, correlations between some of the independent variables can be observed. With a correlation coefficient of 0.380, there is a positive correlation between the duration of the transfer and the steps it requires with a high
significance of 0.001. Furthermore, the duration of the transfer \((r=0.227; p=0.050)\) is negatively correlated to the time of the transfer \((r=0.253; p=0.028)\).

The variance analysis indicates that the model is not suited for a valid forecast, since no significant results can be calculated with regard to the two dependent variables. Although correlations within the set of independent variables and within the set of dependent variables are found, still no actual connections between the independent and dependent variables can be identified. Consequentially, the regression analysis does not contribute towards confirming the research hypothesis. According to the \(H_0\) hypothesis, no significant correlations are found that could be traced to a verifiable influence of the implementation of the generational change on the satisfaction of the successors with the success of the transition or the development of the business. For this reason, the hypothesis is to be rejected in favor of the null hypothesis in the present case.

**Influence of the Predecessor**

In order to establish a connection between the influence of the predecessor and the two dependent variable of success of the transition and development of the business, it is examined next whether the senior entrepreneur had difficulties handing over managerial responsibility and whether there were problems during the transition. Thierfeld (2009) provides on reason for suspecting a relationship by mentioning that the senior has difficulties letting go in 38.4 percent of all cases. This begs the question which relationship exists between the senior and the success of the generational change. The following research hypothesis will be examined for this purpose:

**Hypothesis 3: The predecessor influences the perception of satisfaction of the succession success and the further development of the company.**

First, the correlation is analyzed in a cross tabulation and tested for significance using the Chi-square test. By examining results it stands out that the successors are apparently more satisfied with the success of the transition and rate the development of the business more positively in those cases were there were no problems with the predecessor and handing over managerial responsibility was not too difficult. However, these are only tendencies, since error probabilities of more than 5 percent apply here.
Although no significant correlations can be determined after performing \( \chi^2 \)-tests, a negative correlation of -0.337 still results from the correlation according to Spearman between DV\(_1\) and the independent variable (IV) problems with the predecessor, which indicates a highly significant correlation on a level of 0.01 with a probability of error of \( p=0.003 \). Furthermore, a positive correlation \( (r=0.315; p=0.00) \) between handing over of managerial responsibility and problems with the predecessor can be identified. This indicates an indirect correlation between DV\(_1\) and handing over managerial responsibility. Additionally, DV\(_1\) and DV\(_2\) show a positive correlation with \( p=0.000 \) and \( r=0.611 \).

No reliable statement regarding satisfaction with the success of the transition can be made using the independent variable handing over of managerial responsibility due to a significance value of 0.825 and a beta value of only 0.026. The additionally performed variance analysis confirms this.\(^1\) The additionally performed variance analysis confirms this. With a probability of error of 0.528 and a negative adjusted R\(^2\), it provides no verifiable correlation between handing over managerial responsibility and the satisfaction with the success of the generational change.\(^2\) In this case, the model is not suited for forecasting significant results. When performing a variance analysis on problems with the predecessor and satisfaction with the success of the generation change, the model, having a significance of 0.003, turns out to be suitable for a forecast and, with an error rate of 0.3 percent at a standardized coefficient beta of -0.337, explains a negative correlation.

The results of the correlation analysis are narrowed down through the linear regression of the independent variables with the satisfaction with the success of the transition. The regression show that the variance analysis of the variables of problems with the predecessor and handing over managerial responsibility have a significance of 0.013 with regard to the DV\(_1\) and are suitable for forecasting the DV. Accordingly, given a positive adjusted R\(^2\) of 0.090 and a probability of error of 0.004, an average negative influence of -0.345 of the IV problems with the predecessor on the dependent variables can be presumed. The predecessor therefore has an influence on satisfaction with success of the transition. Regarding satisfaction with the development of the business succession, no significant results were returned. Overall, the results lead to a rejection of the null hypothesis, thereby confirming the research hypothesis.

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\(^1\) The standardized beta is a relative proportion that the IV contribute in order to forecast DV.

\(^2\) The more IV are included into a calculation and the smaller the sample is, the more important it becomes to avoid overrating the variables and the individual values. This is done using adjusted R\(^2\).
Qualification and Experience of the Successors

The next issue to be determined is the influence of qualifications and experiences on the dependent variables. Experience collected in external businesses and in the business to be taken over itself and qualifications and experiences seen as important by the successors are the independent variables in this case. The fourth research hypothesis therefore goes as follows:

Hypothesis 4: The qualification and experience of the successor influences the perception of the satisfaction with the succession success and the further development of the company.

When examining the cross tabulations, a positive correlation between the satisfaction between the satisfaction with the success of the business succession and experiences from external businesses can be determined. Although this is not sufficiently confirmed by a $\chi^2$ test with $p=0.163$, the assumption is supported by an approximate significance of 0.042 (according to Pearson). Between the competence of an entrepreneur and the $DV_1$ there is a clear connection that is confirmed by a highly significant $p=0.000$ for a value of 47.701 ($\chi^2$). A very strong correlation ($p=0.000$) can be presumed for a value of 93.753 for the $DV_1$ and personality/charisma of the entrepreneur. An examination of the results with regard to satisfaction with the development of the business yields significant values of 14.529 ($p=0.006$) for the connection to the career choice, and with regard to management experience/competence there is a declared value of 47.142 ($p=0.000$). The same applies to the correlation with industry knowledge. A declared proportion of 36.128 ($p=0.015$) results here.

There is also a positive relationship according to Spearman to the experiences in external companies ($r=0.235; p=0.042$) and a negative relationship to strategic thinking ($r=-0.271; p=0.019$). The assessment of the development is positively correlated to career choice ($r=0.228; p=0.050$) and negatively related to industry knowledge ($r=-0.237; p=0.041$). Due to the mutually rectified coherence between the two dependent variables ($r=0.611; p=0.000$) further correlations also exist indirectly. For the purpose of enabling a better overview, these can be found in the following table.

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For analyzing the metric variables a calculation according to Pearson would be possible, however, the correlation is calculated according to Spearman since not all examined variables are interval-scaled and mixing calculation methods within one hypothesis limits basic comparability options.
While calculating multiple regression in order to uncover the type of the relationship to the dependent variables, a variance analysis is performed in order to examine the applied model; the resulting significance value of $p=0.272$ indicates that the model is less suitable for making a forecast in this case. An individual comparison confirms this. Nevertheless, a positive significant case ($\beta=0.266$) results that confirms the correlation between the DV$_1$ and the experiences in an external business with a probability of error of $p=0.027$. With regard to the DV$_2$ the model does not turn out to be completely valid, however, at 0.062 the significance is much closer to the acceptance region. This is confirmed by a positive adjusted $R^2$ of 0.102. The coefficient matrix delivers a positive $\beta$ value of 0.225 ($p=0.050$). With regard to the career choice ($\beta$ also 0.255), strategic thinking ($\beta=0.223$) and the personality of the entrepreneur ($\beta=0.25$), the slightly increased probabilities of error make it inappropriate to speak of significant results, however, positive tendencies can be assumed due to the relatively high $\beta$ values.

In conclusion, it can be stated that, for the case just examined, the null hypothesis is to be rejected in favor of the alternative hypothesis for explaining the influence of qualifications and experiences on the DV. The results of the correlation analysis confirm the connection between the assessment of the successor with regard to the dependent variables and the experiences and qualifications.

**Conclusion**

According to a meta-analysis by Heckmann (2009), the criteria of gender and level of education both have a positive influence on the success of a business. Therefore, the result of the present analysis is surprising, which leads to the rejection of the former working hypothesis. With the data of the survey it could not be confirmed with sufficient certainty that there exists an influence of the socioeconomic variables and the degree of satisfaction with the success of the business. However, this need not necessarily be opposed to the results found in the academic literature. Quite contrarily, the deviations could be explained through the size of the sample, since first tendencies for connecting social occurrences of criteria to the dependent variables from crossing the criteria can be clearly distinguished and might only have developed a stronger significance in a data survey of a larger scale. It is not surprising that no confirmation of the influences on the examined dependent variables can be found,
since the distribution of data set at hand proportionately corresponds to the actual circumstances (Schlömmer and Kay 2007).

The results regarding the correlation between the degree of satisfaction with success of the succession can be presented similarly: In this case, too, no confirmatory insights could be found to uphold the hypothesis. It is remarkable that no correlations between the number of steps required to perform the transfer and the assessment of satisfaction emerged. A positive relationship was to be expected here, since reports of its influence can be found in the academic literature (Menzl 1988; Spielmann 1994). Similarly to the previous hypothesis, the lack of any confirmed connections could be connected to the size of the data set.

The influence of the predecessor can be connected to the assessment of the satisfaction with the success and development of the business. The results of the negative correlation between the success and problems with the predecessor are also plausible. Due to the rectified relationship between the independent variables as well as between the dependent variables, interdependencies also indirectly lead to a correlation between the intensity of problems that the senior may have with regard to retiring from the business and the further development of the business. The junior can generally be expected to be more satisfied if disputes and discussions with the senior are kept to a minimum and if the latter does provide advice in case of questions, but otherwise refrains from being involved in active business operations. This may be so because this lets the junior act freely and control the development autonomously. Keeping in mind the mentioned results regarding the influence of the predecessor, an evaluation of the stated working hypothesis can be performed to the effect that the mentioned criteria are to be seen as decisive variables when examining the generational change.

With regard to qualifications and experiences, a number of justified relationships are also established that coincide with the results of the academic literature (Spielmann 1994). Examples are the professional and managerial competences that a successor should possess under any circumstances. The majority advocates a solid knowledge base as a prerequisite for success and a positive future development of the business succession.

Surprisingly, international experience is rated quite low when compared to other qualifications. This could be traced back to the specific characteristics of the participating businesses. Since most of them are small, family-owned handicraft businesses that are rarely
active in a global environment (Röhl 2008), international and intercultural experience seems to be less necessary here than in the high-tech industry, for example (Heckmann 2009).

The large majority of respondents has worked in external companies and was influenced in their choice of career by the prospective succession. Although there are no significant values to support the relationship with the dependent variables in this case either, a tendency for a certain influence can be assumed here as well. A possible explanation for the lack of significance is again provided by the size of the sample, since a larger number of participants is expected to confirm the tendencies.

**Limitations and Further Research**

As the study is limited to German companies country-specific biases could have influenced the results. Thus, the findings can probably not be generalized for other countries.

Mainly successors of small and medium businesses participated in this study. The findings can, therefore, not be easily transferred to large family operated corporations. Further studies could examine the succession plans of large family operated business to identify differences and similarities between the groups.

A high proportion of successors of handicraft businesses participated in this study. This industry differs from other organizational characteristics and procedures. Hence, the findings of this study are biased to some extent by this misbalance in the study sample. Another limitation occurs from the fact that only successors were asked to participate within this study. Hence, a one-sided perception could influence the results. Further research could mirror the perception of successors and predecessors to avoid such a bias.
References


Cross-Cultural Management in Western Humanitarian Micro Firms
in Emerging Countries:
The Case of French Charities in Southern India

Sarah Hillion

Very small Western humanitarian associations can be compared, at a managerial scale, to micro firms (central place of the decision maker, size, and informal processes). Yet to approach such structures, cross cultural management cannot be occulted. After the often mistaken convergence theory and the more realistic divergence one, including mostly qualitative research, some scholars have opted for interpretive approaches through qualitative data. Our field being French charities in Southern India, we will focus on a comparison between the French national culture at work called “logic of honour” (d’Iribarne 1989) and the most famous Indian leadership models (J.B.P. Sinha 1984). Proximity seems to be at the heart of every one’s expectations.

Keywords: cross-cultural management, humanitarian activities, micro firms, Indian models

This paper aims at presenting a literature review to approach the theme of very small Western humanitarian associations in emerging countries and the cross cultural and managerial relations that develop in them. More precisely, we focus on French structures in Southern India, in and around the former French trading post Pondicherry. We rely both on an empirical study led in 2007 and the literature we have tried to gather since then. We want to have a constructivist approach, with, in the end, a confrontation between literature, its first hypotheses and the reality of the Indian field in 2010.
We assume in this paper that these small humanitarian structures, though not-for-profit by definition, resemble the micro firms studied in management sciences. We mainly refer to Olivier Torrès’ works (2008) as well as other French researchers.

What is more, the action being led on foreign territories (very often in so-called emerging or developing countries), decision makers and members being somehow dependant on local employees and beneficiaries, the field of cross cultural management is very relevant for our subject. Therefore we propose to review grossly some of the most famous cross cultural trends, specifying why Philippe d'Iribarne’s interpretive approach (1989, 2004) of national cultures sounds the most appropriate one for our case.

Last, our research field being precisely localized in India— that is a country, or subcontinent, with a culture unimaginably different from the French one—, we find it more than necessary to gather texts from local studies so as to refine our approach and understanding of the theme. We are mainly dealing with Durganand Sinha (1973), Jai B.P. Sinha (1984-2009) and their colleagues of the indigenization of the Indian psyche after the independence (1947), which they have been able to apply to management sciences.

Gathering these three fields enables us to venture the hypothesis that proximity may be a key to approach the international humanitarian micro firms in India.

1. **INTERNATIONAL HUMANITARIAN MICRO FIRMS**

1.1. **ASSOCIATIONS’ LITERATURE, WHAT ABOUT THE SMALLEST ONES?**

Very small humanitarian associations do not often benefit from academic studies in management sciences and have therefore no precise conceptual framework to be studied. In the French law, such structures are hardly framed either since they belong to the particular and vague status of
almost any kind of association in France belongs to this status, according to each citizen’s right to “gather without any previous authorization”. Thus, sports clubs, gambling, painting or acting ones have the same legal rights and duties as the humanitarian ones, whether international or not, that we are dealing with. Associative management or non-profit management does exist as an academic field in France. Researchers mainly rely on the fact that the juridical model of associations is supposed to give each stake holder (member, employee, beneficiary, volunteer, activist or donor) the same rights in terms of expression. According to Laville and Sainsaulieu (1997; 2008), this implies a particular control mode and approach; the latter should be as much about “the quality of interchanges and the modalities of discussing the associative project as about the appreciation of its story, context and evolution”. During the Conference on Association Governance (December 2009), researchers mainly wanted to enhance the legitimacy of associations, adding an institutional point of view to the managerial one. For Polanyi (1983) the main issue for associations as a whole is the “conceptualization of economy in contemporary societies not reduced to market phenomena only”. Therefore associative management does have specialists, but the very theme of small humanitarian associations is hardly dealt with in management sciences. In social sciences, approaches will be purely anthropological or ethnological within the field. Gathering management and associations is not a new attempt, especially in Anglo-Saxon countries. The “non-profit management” is widely studied in the US, with dedicated research laboratories, conferences and regular publications (for example Non profit Times). The trend and main recommendation in the Anglo-Saxon non-profit is to work as “conglomerates of multiple

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1 This is the law of July, 1st, 1901 and freedom of association (www.associations.gouv.fr)
2 International conference on association governance (Paris, November 2009).
organizations” (Anheir 2001). Paradoxically for the French specialists of associative management, Anheir suggests to see issues beyond economical efficiency and take values more into account. In France, associations seldom create partnerships and values are more considered than efficiency (Hillion 2006).

To go further, some French academics have studied the management of NGOs. Quéinnec (2003, 2004) has even specialized in the management of humanitarian organizations for international solidarity (OHSI). For him two paradigms of humanitarian NGOs exist: emergency aid and development aid. Yet in 2004 ( Quéinnec and Igalens), he recognizes that both have been legitimately mixing since the 1980s and presents instead a typology in six categories for the existing NGOs:

- Humanitarian: medical action in emergency situations
- “Pure emergency”: help in situations of natural catastrophe
- Charitable: to struggle against poverty
- Sponsoring: taking care of children in situations of extreme poverty
- “developmentalist”: sustainable approach of populations’ development
- “Technical assistance”: conception and implementation of development projects with strong technical content.

Most of the structures we are studying were born during or soon after the 2004 Tsunami catastrophe (which had not happened yet when Quéinnec wrote his typology) and have lasted thanks to the progressive implementation of development actions (sponsoring and schooling programs, microcredit). If such activities can belong to the types “humanitarian”, “developmentalist” or “sponsoring”, the members always say about themselves that they are “humanitarians”.
Quéinnec insists on the proximity between the situations of NGOs and commercial firms. He cites the incredible managerial success that some of them have met, becoming real multinationals. For the author, three conditions are necessary for NGOs’ survival and durability:

- Strong strategic resources
- Being able to express clearly the concrete modalities of aid
- Incentive to punish, according to the conformity of results.

According to Quéinnec, three types of actors seem able to fulfil these conditions, including more or less obstacles: private donors, public silent partners and the very beneficiaries of the aid (who are quite seldom at the core of studies). The latter fulfil the second condition and in the case of a plethoric offer that would lead to competition between NGOs and therefore a possible choice, they could express an opinion about the quality of the offered service. For the author, this situation is not real (2004). Yet, our 2007 field study in Pondicherry, India (Hillion 2008), showed that it could indeed be real and lead to the sheer modern consumerist behaviour described by the author.

If we come back to the precise case of very small sponsoring humanitarian associations with developmentalist views, we have to recognize that they do not completely fit the frame of NGOs in management sciences. Through their size\(^3\), reduced financial means and not yet institutionalized functioning, they manage members, employees, beneficiaries and the whole structure in a great proximity headed by an omnipresent leader. Such characteristics are at the heart of what management sciences have called micro firms.

**1.2. SMALL HUMANITARIAN ASSOCIATIONS ARE MICRO FIRMS**

\(^3\) Often much less than ten members: a president, a treasurer and a secretary are the only necessary members to create an association according to the 1901 law in France.
Researchers have established the characteristics of micro firms: lack of specialization, central place of the leader, centralized decisions, weak resources, informal information and human resource management, and strong dependency to the environment (Torrès 2008). Most of these characteristics seem to fit our small humanitarian associations.

The structuring link of the characteristics is a full “mix of proximities” (Torrès 2008). Proximity will soon prove to be a central point for the majority of the theories we are gathering, whether from France or India. The themes of field anchorage, alliances, omnipotent leader and crises do structure the vision we want to give of very small French charities.

<table>
<thead>
<tr>
<th>CHARACTERISTICS OF THE SMALLNESS OF FIRMS</th>
<th>TYPES OF PROXIMITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominant part of the leader, personalized management</td>
<td>Hierarchic proximity</td>
</tr>
<tr>
<td>Little specialization of tasks</td>
<td>Functional proximity</td>
</tr>
<tr>
<td>Informal and short term strategy</td>
<td>Temporal proximity</td>
</tr>
<tr>
<td>Simple and direct IT system (orality)</td>
<td>Proximity IT System</td>
</tr>
<tr>
<td>Direct contact with customer</td>
<td>Proximity Marketing</td>
</tr>
<tr>
<td>Strong concentration of capital in the hands of the leader / Confusion between the leader’s patrimony and the firm’s capital</td>
<td>Proximity Finance</td>
</tr>
<tr>
<td>Strong territorial integration</td>
<td>Spatial Proximity</td>
</tr>
</tbody>
</table>

Our 2007 empirical study (Hillion 2007) showed the predominant part of associations’ leaders, who take care of their project as their “baby” and tend to decide any point, which may sometimes lead to malfunctioning if trust is not generated among all members and employees.
The whole structure is informally managed through almost familial relationships and extremely simplified processes (email and phone communication, decisions taken immediately, everything being based upon trust). French members all know each other, they use the French intimacy “tu” form and the leader often shows a paternalist attitude with the Indian employees and beneficiaries.

In the case of very small humanitarian associations, all actors should be taken into account. A report written for the French Red Cross (Hillion 2006) displays the motivations of volunteers, members and donors in front of such structures. Unlike their big market leaders rivals (whose customers are targeted through solid and widespread marketing campaigns and only offer a formal presence in local areas), the small ones offer a proximity service which reassures and encourages those who would like to give time and/or money. Wanting to get closer to poor and distant families is a triggering factor for donation. Their communication strategy is synthesized in Table 2.

<table>
<thead>
<tr>
<th>TABLE 2.</th>
<th>LOCAL ASSOCIATIONS STRATEGY: EVERYTHING IS IN PROXIMITY (HILLION 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local association</td>
<td>Local humanitarian associations with international dedication</td>
</tr>
<tr>
<td>Sports type</td>
<td>(for example Le Désert refleurira)</td>
</tr>
<tr>
<td>Upstream</td>
<td>• Weak communication: only for events.</td>
</tr>
<tr>
<td></td>
<td>• Communication through local press</td>
</tr>
<tr>
<td></td>
<td>• Internet website</td>
</tr>
<tr>
<td>Downstream</td>
<td>➢ Daily contact with “donactors”)</td>
</tr>
<tr>
<td></td>
<td>➢ Will to make them participate</td>
</tr>
<tr>
<td></td>
<td>➢ Regular sharing of results and actions led</td>
</tr>
</tbody>
</table>
For Moles and Mohler (1978), “what is close is, all else being equal, more important than what is far, whether an event, an item or a being”. The strength of small associations is to be close enough to their donors for them to feel involved in the association issues and feel acting with its leaders for other people’s sake. This is the reason why donors are called today “donactors”. Torrès often reminds us that micro firms mainly deal with local customers. The donors from the French associations we studied in 2007 mostly live (more than 80%) in the head office area. If proximity is necessary, its contrary paradoxically does exist, given that these associations have an international commitment.

1.3. ABOUT INTERNATIONALIZING HUMANITARIAN MICRO FIRMS

For Torrès, globalization “denatures micro firms” since it is contrary to its original characteristics. Internationalizing small structures implies to shift from a proximity management to a distance one through certain decentralization, clearer task division and more sophisticated IT Systems. These are exactly the problems that small associations have to face, all the more as some of them tend to grow and multiply local offices.

If “what is close [...] is more important than what is far” (Moles), what about what happens so far, on the humanitarian field? This question is available for both parts of the world: donors and members are away from (though not affectively) the poor countries, but local employees and beneficiaries are distant form the managerial and centralized heart of the structure.

For Moles and Rohmer, if the object becomes too distant, the “wall concept” psychologically emerges to protect what is close and to protect oneself from what is far by diminishing its importance. For French donors and members, the hypothesis is only partially valid because distance is supposed to be an accepted factor from the beginning. It is different with local employees. They are not as much interested in helping poor foreigners because they are wage
earners, they are not “foreigners” in their country and they are poor themselves. These employees, mostly women in associations dealing with abandoned, beaten or raped women, are indeed often from the same class as the beneficiaries, they are not volunteers. So when the visiting French members go back to their rich country, the wall phenomenon may appear. Our 2007 study showed that the work rhythm and rules imposed by French leaders tend to be considered less strictly and get closer to more traditional Indian rhythm and rules when French people are away. The only remaining contact when Westerners have gone is virtual: through the Internet. A 2010 field study should partly answer these questions: has geographical distance an influence over local employees’ activities? If so, to what extent?

Proxemics can be approached from another view, the anthropological one. In anthropology, researchers speak about social distance and reciprocity. Sahlins (1968, 2004) describes the notion of social distance as circles defining reciprocity relationships that people may have according to which circle they belong to. In most societies, the first circle is the house and the second one the family (“lineage”), where reciprocity is generalized (one gives, whatever the situation). As soon as one gets to the circle of the village, then of the tribe, reciprocity turns relative; the situation must be “nothing for nothing”. Last, if one gets in touch with someone from outside the circle, that is someone with no initial link (family, tribe, geography) with oneself, we have a fully different situation: it is a “something for nothing” situation. Moral commitment disappears and theft, mistrust, even indeed hostility are the main criteria of such relationships. In India, we could attend abuses from some employees and beneficiaries who obviously did not offer the same level of trust and respect (by refunding correctly) to French microcredit associations as to their neighbours, for instance, who would lend them money at much higher rates.

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4 The author speaks about so-called primitive societies, but he insists upon the fact that modern societies are still influenced by these old and unconscious reflexes.
Now that we have displayed the characteristics of international humanitarian micro firms and some of the problems they may have to face, we cannot possibly go further in our reflexion without taking cross cultural issues into account.

2. CROSS CULTURAL MANAGEMENT, FOUNDATION AND EVOLUTIONS

2.1. FROM CONVERGENCE TO DIVERGENCE

Our subject can be integrated in the recent and sometimes criticized cross cultural management current. Historically, two opposite paradigmatic axes started the issue (Dowling 1999), though the internationalization of trade went faster than intercultural research (Adler, 1983). The first axis, mostly from North American theories, was called convergence. The convergence
hypothesis (or etic approach) dominated the 50s and 60s in the US (and in Europe too, given to a lack of studies); it mainly relies on a macro analysis of international and cross cultural relationships (like, for instance, technology tools). It argues in favour of economical and managerial universality principles, according to which agents react the same way to identical management processes, thanks to adaptation. The different practices should be adjusted so as to fit the American model.

The second axis, called divergence or emic approach tends to study the same relations through micro processes (like analyzing employees’ behaviour in a firm). Its representatives state that nations preserve, even indeed tend to assert their differences in front of globalization and modernization.

2.2. CROSS-VERGENCE AND INTERPRETIVE APPROACHES AFTER QUANTITATIVE DIMENSIONS: CREATING AND GIVING SENSE TOGETHER

A new and more recent lead (Ralston et al. 1997) suggests that the “cross-vergence” model (a “melting pot philosophy” of value creation) should be more appropriate to studying international relationships in management sciences. For Ralston, integrating values from a different culture, though conserving one’s own values, is the best way to manage international human resources (especially at local level). We consider this approach adapted to our subject, as well as Philippe d’Iribarne’s one, from the Gestion et Société⁵ group (CNRS).

Distancing themselves from American conceptions, some European researchers have been trying since the 1980s to enhance the necessity of taking into account cultural differences for successful organizations (Hofstede 1980). Dimensional and very often quantitative approaches (Hofstede 1980 and 1991; Trompenaars 1993) have displayed cultural differences at a world scale. Hofstede, for example, highlighted four famous dimensions: Power Distance Index,

⁵ Management and Society
Individualism, Masculinity, and Uncertainty Avoidance Index. He decided to add the Long-Term Orientation dimension when Asian studies proved that at least one more dimension did exist and was very relevant for Asian people.

Such studies precede interpretative and multidisciplinary approaches (Gestion et Société). Avoiding the trap of field shift (some opponents claim that management is no sociology and even less anthropology), d'Iribarne recommends qualitative empirical studies that should call upon management theories, but also economy, sociology, ethnology and anthropology (d'Iribarne 2004) in order to make sense together by knowing each other. The group researchers deplore a lack of studies in Asia and in more varied organizations.

Despite critics (Barbichon 1990, then Allali in 2001 about the Thomson study in Morroco – *La logique de l’honneur*, 1989), like the one for generally thin sampling and therefore difficult generalization, some authors do get involved in the approach: Tayeb (2001) starts from a critical analysis according to which management researchers do not take enough cultures’ heterogeneity into account; Deval et al. (1993) recommend that researchers should involve themselves totally and in a long-term approach among the members of the studied community... and should systematically have recourse to social sciences, even in management sciences.

Thus, if dimensional approaches\(^6\) are not excluded from our work, they are not our main references.

### 2.3. The French National Culture at Work and... the Indians

D’Iribarne studied the French at work in his famous book *La logique de l’honneur*\(^7\) (1989), and again in *L’Étrangeté française*\(^8\) (2006). His lead is that national cultural values underlie all social

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\(^6\) To which one should add Edward T. Hall’s arguments. As an American anthropologist, he studied interculturality in management, enhancing differences between high-context cultures and low-context ones; between monochromic and polychromic cultures and their relation to space, which he called “proxemics” (Hall, 1984).

\(^7\) The logic of honour.
life in firms. He cites Montesquieu to explain one of the French key values, which is “the prejudice of each person and each condition”. Honour would be the heart of human processes in French firms, whatever the hierarchic guidelines, with pride for well-made work and rejected critics about it if they come from an outsider (to the task). The author goes further:

“One can find in France a conception of grandeur proper to a cast wedded to its rank, which senses like an unbearable attack any request for carrying out actions unworthy of it.” (2006, p. 49)

This “strangeness” thus mixes a great respect for posts and duties/responsibilities and a certain form of hostility, even indeed mistrust and suspicion between them. This is why individual relationships should be favoured to get collective harmony. Such behaviour can be found in any kind of organizations and we can definitely suppose that it does occur in humanitarian micro firms. A case study about a three-dimensional crisis in one of them (Hillion 2007) does show the drifts to which honour may lead, with diminishing trust until donors, members and even beneficiaries run away to rival associations. But let us not remain deaf any longer to the strange comparison (the reader will have undoubtedly noticed) made by d’Iribarne between the French culture and the cast system. We can indeed foresee a first connection between the two cultures.

Because what do cross cultural studies reveal about the behaviour of Indians at work? The dimension specialist (Hofstede) classified India as a country with a very high power distance index, a light masculine tendency, very low uncertainty avoidance index, (unexpectedly) tendency for individualism and long-term orientation. If we compare these results to France’s ones, we can notice some differences, but not as striking as expected:

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8 The French strangeness.
9 We are citing these data for an easier approach of the subject; yet, like many Western and Eastern researchers, we consider that these dimensions tend to generalize too much and do not take into consideration complex local contexts.
- Indians rank higher on the power distance index (77 vs. 69; world average 57), but French rank higher than most Western countries (Austria 11, Ireland 28, Germany 35).
- The French would be less masculine than Indians (43 vs. 56) but not on a large scale.
- Indians would be less individualist than French people (54 vs. 71) but they rank higher than other poor countries (8 in Ecuador).
- Actually, the uncertainty avoidance index is the one that most differentiates the two cultures: both almost culminate at the opposite extreme (40 for India and 86 for France), revealing for India deep trust in circumstances and an exceptional adaptation ability when risks and reversals come out (Hindu beliefs like reincarnation would explain it), and a need for control often related to the imperial history and a repressive legislation for France.

To go further, in his last book (Penser la diversité du monde\textsuperscript{10}, 2008), d’Iribarne rephrases his comparison basis for national cultures as the most feared peril in a given society. In India, the worst is to become impure (the cast system, still very pregnant in spite of the 1950 Constitution which officially abolished it, would be a reference to impurity). In France, the big peril would be to be reduced to give in, out of fear or interest, in front of who can harm or give favours. The two behaviours or behavioural tendencies resulting from this for French and Indian people at work seem to be connected through a certain pride or honour, which may lead to mistrust, sometimes disdain.

But all this data cannot be relevant if we do not check what the first concerned, at the end of the world, think. Let us see what Indian researchers say.

3. \textit{The Indian Management and Its Representations, an Essential Key}

3.1. \textit{From Social Sciences to Management Sciences, from the Indigenization of Psyche to HRM}

\textsuperscript{10} Thinking the world diversity.
As many researchers from emerging economies, Indian academics have tried to get heard at least as much as the others when it comes to study how their own culture can coexist with others at work.

Before shifting to cross-cultural management as a management science, they started with psychology and philosophy in order to reclaim a common national psyche after independence and partition: this is the indigenization of the Indian psychology (Durganand Sinha 1973 and 1986). Sinha’s school of thought widely influenced psychology and social sciences more generally. It is interesting to note that many Indian management researchers, unlike most of French ones, come from social sciences. In sciences, there is no cast.

With more and more studies coming from the West about interculturality at work and the analysis of all countries on stage through globalization, Indian academics decided to question the ethnocentric approaches of researchers who do not know the Indian reality.

Srinivas (1966, 2000) puts his finger on the inadequacy of Western managerial models and the unsustainable results on the long run, given to a cultural decontextualization. Jai B.P. Sinha comes in 1980 with his famous “nurturant-task leader” (NTL) to make the world understand how Indians are at work, what they expect and cannot accept. He suggests the indigenization of leadership and organizational behaviour theories.

### 3.2. Leading in India, NTL and Other Models

Sinha, as many other Indian researchers, has been repeating for decades that Indian employees do not exactly perceive the relationship to a leader the same way as Westerners do. First, they have a high “context sensitivity” and are permanently and unconsciously looking for “balancing”. In practical terms, for example, they find it hard to contradict a superior and highly adapt their behaviour and answers to persons and context. Therefore, quantitative studies and
pure etic approaches are strongly advised against by the author. He recommends qualitative studies and approaches using a mix of etic/emic for the field.

Then, Indians perceive control and reprimands as a lack, even indeed a suppression of trust, which may lead to the worst drifts for the organization. Loyalty and personalized relationships are the main sources of efficiency and performance.

In such a context, the Indian leader has to “nurture” his professional relationships and his employees’ well-being and development as much as the firm’s results. Personalized and dependency relationships (Chhokar 2007) must be established, the leader taking part in their lives (weddings and functions, ceremonies, etc.) and giving them esteem. In India, a good leader must be an “authoritative” and trustable figure instead of a mere “authoritarian” one. On that account, he or she will for instance “supervise” his or her employees, expecting a well-made task. In such a case, the employee’s award is to be appreciated by his warm and benevolent superior.

On a long-term basis, this trust relationship should lead to a form of interdependency and consequently higher productivity, everybody’s growing skills and even, in the best cases, the employee’s autonomy before he or she becomes a charismatic and caring leader in turn.

This particular relationship can be compared to the one between a father and a son\textsuperscript{1}, a guru and his or her disciple, Gandhi and the Indians. This model should be adaptable regardless of sex, cast or any dividing reference, though they still underlie daily relationships and interpretations in the country. If we come back to our theme of very small humanitarian associations, the field showed us in 2007 that Indian employees and beneficiaries (none of whom being trained to management techniques) tend to put in practice this proximity relationship with French leaders.

\textsuperscript{1} Or a mother and her children, Sinha does not seem to see a specific gender in his theories. Besides, India is a woman (Mother India).
and treat them like family members (one director was nicknamed “Ayah”, which means “Grandma” in Tamil, and she was invited to many functions).

Since Sinha, India has presented numerous leadership models, most of them inspired from the original one. Subash Sharma (2002) publishes works to create a full Indian leadership model. He reviews authors and models, but also the purely Indian ideas and values, collected from sacred texts, mythology and customs without which no model should be conceivable:

1. Everyone’s well-being (*sarve bhavanthu sukhina sarve shantu niramaya, Loksangraha*)
2. The ethics of profit (*Shubb Labh*)
3. Detached action (*Nishkam Karma*, that is taking actions without expecting immediate results)
4. Work as a veneration (one should work like he or she worships a god)
5. Divinity in human beings (“any soul is potentially divine”; according to the philosopher Vivekananda, this is the core of personal development)
6. Family (*Kutumbh*, the whole world is seen as a family)
7. Avoid extremes (like Buddha’s middle path, in India, people look for adapted solutions rather than one for everybody).

Figure 2 synthesizes Sharma’s model and interactions between Indian values.
3.3. **Other Important Points**

Like the country, the Indian literature (whether scientific or artistic) is vast, varied and relevant because it gets sense from one of the most ancient human history in the world. Therefore the literature gathered here is reduced to a minimum in order to apprehend our subject. But to have as many keys as possible, we do think that one should not only focus on managerial texts. For instance, many authors insist upon the fact that intercultural studies only show one version of a country’s culture, without taking into account its possible internal diversity. India, immense and
terribly old subcontinent, is the second most populated country on Earth (almost 1.2 billion inhabitants); not less than 23 languages are officially recognized and more than 1,600 dialects would be spoken on the territory; all religions are present, including animism; it is a federation composed by 28 states and seven union territories, hosting billionaires and starving farmers. The list could be longer, it would maybe confirm that the Tamil culture and history might have to be studied further for our issue.

One should also exclude any cliché that sees Indian people, as well as all those from emerging or poor countries, as purely collectivist, without any place for individual aspirations. For Durganand Sinha (1994), Indians are vertically collectivist; that is they give a major importance to their family members but with a different status according to their age, gender or need. This is how they can be individualist in their personal development, all the more if they are educated because they are influenced by their Western counterparts, the countries they study in, the books they read.

**CONCLUSION**

Given the gathered literature of this paper, we think that the very small French humanitarian associations in emerging countries must be approached qualitatively, with an open and multidisciplinary view. We do know that there is a risk in such studies: getting lost in social sciences. But management sciences are social and human, all the more when they come to internationalizing generosity.

If we compare all our references, we can see that they are not opposed at all. They might even be complementary:

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12 Pondicherry is a union territory in the middle of Tamil Nadu, said to be the most conservative Indian state.
- French people have honour in their skin and Indians have purity; all of them need respect for their work and no permanent questioning.
- In micro firms (even humanitarian ones), they work in proximity and informality; this is the core of the successful models in India.
- Work relationships must be very strong and imply personal development and family in India; the French want to succeed in their task without any constraint and be able to give their trust to avoid disappointment.

A field study will take place in India this year (2010) to confront literature and reality. Our main focus will be on local employees’ and beneficiaries’ interpretations of their situation. We hope we will be able to share the first fruits of our findings.

Sarah Hillion is a doctoral student in Management Sciences in Montpellier 1 University, France. She has been working on the internationalization of humanitarian activities and cross cultural management in the field for years, including two Mater degrees in Management and International Business. She works with the ERFI laboratory in Montpellier and has represented the Montpellier Business School in various international conferences. Her last research study was conducted in Pondicherry (India), under an affiliation with the IFP (French Institute of Pondicherry).

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Internationalization of Small Firms – A comparative study of CEOs’ global mindset and their firms’ internationalization behavior

-Report of research-in-progress-

Abstract
The study aims at replicating a study done in 2006 with focus on the formation of a global mindset among small firm CEOs and the causal relationship between the global mindset and the firms’ internationalization behavior. The original study was done using a sample of Norwegian firms with between 10-50 employees. This is a report of the first stage of replicating the study in Portugal and Spain. While the findings so far indicate some differences between the samples, it is currently too early in the research to be able determine whether the model developed in the original study is valid also in Portugal and Spain. The report outlines the study’s conceptual foundation, research design, methodology and discusses the preliminary findings.

Keywords: small firms, internationalization, global mindset, firm behavior, managerial cognition

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1 Corresponding author
Introduction

This research project defines internationalization as the process of adapting firms’ operations (strategy, structure, resources, etc.) to international environments. This is a holistic perspective of internationalization (Welch & Luostarinen, 1993; Fletcher, 2001) which leaves the door open for inward connections and processes, that is transactions into the country, or outward connections and processes that is transactions out of the country. The definition is similarly not restricted to the flow of physical goods, but includes information, exchange of technology, know-how and competencies (Havnes, 2001).

With the small firm (10-50 employees) as the unit of analysis, the focus in the following is on exploring variables related to the internationalization process and illustrate how also cognitive phenomena form an integral part of the internationalization process, as well as being central in the entrepreneurship- (Baron, 2004), networking- (Welch and Welch, 1996) and strategy literature (Knight, 2001; Hodgkinson and Sparrow, 2002).

Conceptual foundation

It appears to be generally accepted that the CEO’s entrepreneurial orientation and perception of opportunities and threats (Baron and Ensley, 2006) play an important role for small firms’ propensity to internationalize. In this perspective, internationalization-propensity may depend on the decision maker’s perception and interpretation, through the mindset, of resources and capabilities, psychic distance, the firm’s need to acquire new knowledge and its capability and willingness to share in-house knowledge with other firms or agents in the internationalization process. “How successful a company is at exploiting emerging opportunities and tackling their accompanying challenges depends crucially on how intelligently it observes and interprets the
dynamic world in which it operates. Creating a global mindset is central requirement for building such intelligence” (Gupta and Govindarajan, 2002, p. 125). With specific reference to small firms’ internationalization and the role of the decision-makers, Chetty and Campbell-Hunt (2003) identify the decision-maker’s determination, social networking skills and risk propensity as main driving forces. The authors conclude: “The implications for theory are that to improve understanding of the internationalization of SMEs (Small and Medium Sized Enterprises) researchers need to integrate internationalization theories with the characteristics of SMEs. Moreover, it is important to note that the attitudes and motivations of decision makers in the SMEs determine the path and pace of internationalization. The implications for managers are that they need to be aware of the importance of issues such as their own attitudes and motivations, timing, coherence, managed growth, business networks and learning in the internationalization process. In fact, managers need to be aware that the mental models they have could be their main barriers to internationalization” (ibid, p. 814, italics added).

Kyvik (2006) and Kyvik, Saris and Bonet, 2010 adopted a cognitive perspective on management in order to explore the formation of the global mindset among small firm CEOs and the relationship between the global mindset of the decision makers and their firms’ internationalization behavior. A conceptual model (Figure 1) and measurement instrument were developed based substantive theory. Using structural equation modeling, the theoretical conceptual model was estimated based on empirical data for Norwegian small firms and subsequently developed and partially confirmed. The objective of this research project is ultimately to verify whether the model developed may be categorized as a general model by replicating the study in two additional samples, respectively in Portugal and Spain. What
follows is a report of research in progress. The current stage of empirical research will be outlined, methodological concerns discussed and empirical findings highlighted and discussed.

The paper concludes with a discussion of the appropriateness of the research design and a brief review of future research related to this study.

**Research questions**

Much has been published regarding the global mindset construct and its relevance for multinational firms in an increasingly globalized world economy (Jeanett, 2000; Javidan, Steers and Hitt, 2007; Levy, Beechler and Boyacigiller, 2007). However, much less attention has been granted to the relevance of CEOs’ cognitive processes and their mindset as to how small firms perceive international opportunities or competitive threats (Chetty and Campell-Hunt, 2003; Kyvik, 2009). Also, much of the literature with a cognitive perspective on management (Hodgkinson and Sparrow, 2002) and with focus on internationalization and the managerial challenges of globalization in particular (Gosling and Mintzberg, 2003), is of conceptual nature. Relatively few studies discuss the formation of a global mindset and the theoretical measurement of the construct (Gupta and Govindarajan, 2002; Nummela, Saarenketo and
Puumalainen, 2004) and those that do frequently refer to multinationals. In response to this void in the literature, this research focuses on small firms’ internationalization and attempts to find out the reasons why some small firm CEOs have an international perspective when considering the strategic opportunities and threats of their firms while others appears almost oblivious to international markets.

By amplifying the original study’s Norwegian sample with observations from Portugal and Spain, cultural and industrial differences and possible consequences for the formation of the global mindset will contribute to determining whether or not the model developed by Kyvik (2006) is a general model describing the formation and effects of having a global mindset in small firms or not.

**Research design**

While opting for a quantitative approach to the data collection and data analysis, the research design is inspired by a constructivist research philosophy as the literature and theoretical constructs are solidly rooted in a cognitive management perspective.

The research follows the common research stages of developing a conceptual model based on combined inspiration from practice and theory and determining appropriate methodology based on a careful consideration of pros and cons of the

![Figure 2: Research-design](image-url)
available options and resources.

Population and sample were determined by considering what would be most suitable considering the research questions. Similarly, the preliminary data analysis was performed with conscious focus on the research objectives and its implications for theory and practice.

**Data collection and analysis**

The research was operationalized using an internet/web-based survey instrument to collect data and measure the global mindset and the firm internationalization behavior primarily based on Likert-scale measures.

The survey was specifically constructed for this type of research. Each of the item-constructs of the questionnaire is anchored in existing literature and the measurement of the individual constructs, have Cronbach alphas indicating good reliability.

The population for the study is limited to firms with between 10-50 employees while the sample was limited to sectors of the industry in each national market reasoned to be particularly exposed to international competition\(^2\) and thus either directly (exporting or importing directly) or indirectly (buying and selling to/from other importers or exporters) more or less active importers and exporters.

The data collection process, however, turned out to be considerably more complicated in Spain than in the other countries. A lot of time was required to get access to the individual CEOs’ e-mail addresses and eventually the only option was to call each firm in the sample randomly

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\(^2\) **Norwegian simple**: Construction/real-estate, trade/commerce, maritime industry/shipping, off-shore/oil&gas industry, fishing industry, land-based industry, media/publishing, IT and research and development  
**Portuguese sample**: Construction/real-estate, trade/commerce, textile, footwear, chemicals/plastics, agriculture, IT and research and development  
**Spain**: Construction/real-estate, trade/commerce, industry, service, agriculture, IT and research and development
selected from the company-registry listing and simultaneously promote the research project and request the e-mail address of the CEO. The reasons the reluctance of the firms to participate in a research project, might be cultural (several CEO complained about receiving too many survey requests) or lacking understanding of the significance of participating in research (and this in spite of offering free copies of the research results + a small premium). In Norway sufficient responses were at hand within 2 weeks from “going live” with the survey while in Spain the process still continues after 4 weeks of sending out regular reminder e-mails. Eventually, 215 responses were received in Norway, 257 in Portugal while only 120 in Spain representing respectively a response rate of 50% in Norway, 9% in Portugal and 15% in Spain.

A stratified sample was used with expected only minor differences found between the size-ranges of the population and the stratified sample.

Towards the end of the data collection process, it is concluded that electronic data-collection (web-based survey) is very efficient, however, the difficulty of getting access to a random sample of CEOs e-mail addresses must be considered and the cost of getting access both the e-mail addresses and to a suitable data-program to manage the data-collection process must be taken into account when evaluating data-collection choices and expectant response rates.

After collecting the empirical data, this was analyzed using SPSS (version 16), while the analysis of causality will be performed using LISREL (8.80 student version).
## Descriptive data analysis - preliminary findings

<table>
<thead>
<tr>
<th>Descriptive observations</th>
<th>Norway (N)</th>
<th>Portugal (P)</th>
<th>Spain</th>
<th>Difference (N-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childhood ambience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visited other countries as a child</td>
<td>62,3%</td>
<td>64,6%</td>
<td></td>
<td>-2,3 %</td>
</tr>
<tr>
<td>Have or had relatives living abroad</td>
<td>73,0%</td>
<td>72,4%</td>
<td></td>
<td>0,6 %</td>
</tr>
<tr>
<td>Parents travelled internationally when growing up</td>
<td>28,4%</td>
<td>22,6%</td>
<td></td>
<td>5,8 %</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have university education</td>
<td>47,9%</td>
<td>26,8%</td>
<td></td>
<td>21,1 %</td>
</tr>
<tr>
<td>Have studied abroad</td>
<td>16,7%</td>
<td>8,6%</td>
<td></td>
<td>8,1 %</td>
</tr>
<tr>
<td>Language skills (English)</td>
<td>77,9%</td>
<td>61,1%</td>
<td></td>
<td>16,7 %</td>
</tr>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age (years)</td>
<td>46</td>
<td>45</td>
<td></td>
<td>0,74</td>
</tr>
<tr>
<td>CEO is female</td>
<td>6,5%</td>
<td>23,7%</td>
<td></td>
<td>-17,2 %</td>
</tr>
<tr>
<td>Ethnic origin (both parents)</td>
<td>95,3%</td>
<td>96,9%</td>
<td></td>
<td>-1,6 %</td>
</tr>
<tr>
<td>Cross disciplinary collaborator</td>
<td>79,4%</td>
<td>77,4%</td>
<td></td>
<td>2,0 %</td>
</tr>
<tr>
<td>Can influence what takes place (locus of control)</td>
<td>81,1%</td>
<td>82,7%</td>
<td></td>
<td>-1,6 %</td>
</tr>
<tr>
<td><strong>Net-working team player</strong></td>
<td>73,3%</td>
<td>85,4%</td>
<td></td>
<td>-12,1 %</td>
</tr>
<tr>
<td>CEO is pro-internationalization/willing to internationalize</td>
<td>58,1%</td>
<td>74,4%</td>
<td></td>
<td>-16,3 %</td>
</tr>
<tr>
<td><strong>Firm characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average number of employees</td>
<td>23</td>
<td>24</td>
<td></td>
<td>1,00</td>
</tr>
<tr>
<td>Firm has one majority owner</td>
<td>62,8%</td>
<td>51,0%</td>
<td></td>
<td>11,8 %</td>
</tr>
<tr>
<td>Firm has a foreign majority owner</td>
<td>5,6%</td>
<td>4,7%</td>
<td></td>
<td>0,9 %</td>
</tr>
<tr>
<td>Firm is located in a town</td>
<td>45,1%</td>
<td>51,8%</td>
<td></td>
<td>-6,7 %</td>
</tr>
<tr>
<td>Firm has been established more than 5 years</td>
<td>94,0%</td>
<td>93,8%</td>
<td></td>
<td>0,2 %</td>
</tr>
<tr>
<td>Firm produces written strategic plans</td>
<td>65,6%</td>
<td>35,0%</td>
<td></td>
<td>30,6 %</td>
</tr>
<tr>
<td>Firm engages in in-house R&amp;D</td>
<td>51,0%</td>
<td>3,6%</td>
<td></td>
<td>47,4 %</td>
</tr>
<tr>
<td>Tech advanced products/services</td>
<td>58,0%</td>
<td>69,4%</td>
<td></td>
<td>-11,4 %</td>
</tr>
<tr>
<td>Domestic performance satisfaction</td>
<td>69,6%</td>
<td>70,1%</td>
<td></td>
<td>-0,6 %</td>
</tr>
<tr>
<td>Active domestic networking</td>
<td>61,9%</td>
<td>63,1%</td>
<td></td>
<td>-1,3 %</td>
</tr>
<tr>
<td>Firm is or has been internationally active</td>
<td>66,5%</td>
<td>82,1%</td>
<td></td>
<td>-15,6 %</td>
</tr>
<tr>
<td>CEO is daily exposed to international interactions</td>
<td>64,4%</td>
<td>71,6%</td>
<td></td>
<td>-7,1 %</td>
</tr>
<tr>
<td><strong>Number of observations</strong></td>
<td>215</td>
<td>257</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
With reference to the conceptual model (Figure 1), Table 1 below summarizes some of the descriptive variables of the samples (Norway and Portugal). The findings are for most of the variables quite similar. This may not be surprising; after all we are comparing two European countries, however, located on the extreme north and south of the continent with a slow convergence towards common European values reportedly on its way (Gooderham and Nordhaug, 2010). However, simultaneously, we are considering countries with very distinct history, culture and religious traditions and differences in values (Hofstede, 1991/1997, 1998) are certainly expected. With reference to Table 1, which in summary form illustrates variables related to the questions regarding the CEOs childhood ambience, education, demographics, personality characteristics of the CEO and firm- and work-ambience characteristics, noteworthy differences are highlighted\(^3\) and commented on as follows. As can be seen, a significantly higher number of Norwegian small firms’ CEOs has university-level education. Taking into account the difference in gross national income (GNI) per capita\(^4\) (Norway with US$ 87.067,- versus Portugal’s US$ 20.556,-), the difference in education level is not surprising granted that part of Norway’s GNI is allocated to mainly public universities and subsidized student-financing for students from all social levels. Portugal does not have a similar educational- and support system and this is most likely reflected in the lower score. Also the language skills (English) probably partly reflect the difference in the educational system, where the English skills of Norwegian CEOs are higher than their Portuguese colleagues.

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3 Differences in score of more than 10% are highlighted. Values for Spain will be provided.
4 OECD 2009
However, somewhat surprising, the data indicate a much higher number of female small firm CEOs in Portugal than the case is for the Norwegian sample. According to Hofstede’s (1991/1997) research on cultural dimensions in management, both Norway and Portugal are countries scoring relatively low on the masculinity versus femininity score, however, Hofstede in his study from the 1990s reports a lower score in Norway than in Portugal. A possible explanation of the relative high number of female small firm CEOs in Portugal may be the rapid social changes that have taken place during the last 30 years and particularly during the last decade. Apart from a gradual liberalization of society, sequential governments have also on institutional level promoted equality between the sexes and supported women’s participation in politics, organizational life, as well as, in management. The noted high percentage of female small firm CEOs is probably an effect of this legislative climate and conscious gender policy.

The Portuguese CEOs are found to score higher than their Norwegian colleagues regarding their inclination to work in teams. This finding is considered to be in line with Hofstede’s overall conclusions of Portugal being a collectivist and consensus-seeking society with relatively stronger group adherence and less individualism. In comparison, Norwegian CEOs are generally much more individualistic in spite of society’s strong social democratic ideology. Empirical experience based on collaboration with Norwegian small firm CEOs also serves to confirm that Norwegian small firm CEOs appear to find team-work, external networking and collaboration with other firms challenging and tend to give social-oriented management activities relatively low priority in day-to-day management. Other dimensions, such as religion, climate, geography and population-density also may negatively impact Norwegian CEOs’ tendency to socialize
(also, with a population density of 12.5/km² compared to Portugal’s 114/km², the probability of a chance socializing with other CEOs across the mountain or fjord is relatively low).

Further, with reference to the CEOs’ pro-internationalization attitude and propensity to internationalize, the Portuguese CEOs are found to have a 16% higher international inclination than do the CEOs of the Norwegian sample. Explanations for this finding may be cultural-historic, it is for instance possible that contacts with the markets of former Portuguese colonies even today positively contributes to a higher consciousness of foreign markets also among CEOs of Portuguese small firms.

The proportion of small firms with one owner is larger in Norway than in Portugal. The reasons for this may be varied and possibly related to Portuguese CEOs’ higher score on the team-work variable. Higher collectivist and consensus-seeking values in Portugal than in Norway may positively influence Portuguese CEOs and managers in establishing joint-ventures and other types of joint-operations with other firms. The choice of ownership-structure will in any case eventually impact internationalization by making it considerable easier and quicker as a sole owner rather than with several, however, possible lack of funding by going alone may on the other hand counteract this potential benefit. Other variables in Table 1 will also influence and thus the causal direction and impact are uncertain at this stage.

It appears noteworthy that as much as 66% of the Norwegian small firm CEOs reports to engage in formal strategic planning while comparatively only 35% of the Portuguese CEOs reports to produce written strategic plans. This may be related to the relatively higher level of university
education among the Norwegian CEOs compared to the Portuguese sample. Further interpretation of this score is uncertain as according to Hofstede’s findings, Portugal scores considerably higher than Norway on the uncertainty avoidance index and one should, ceteris paribus, anticipate that this should result in a greater inclination to plans and norms in an attempt to reduce uncertainty. Also, in this case further interpretations and direction of causality are highly uncertain at this stage of the research.

Finally, and this may be related to the low tendency to make strategic plans, very few of the Portuguese CEOs report that the firm engages in research and development (R&D). While 66% of the Norwegian CEOs engages in R&D, only 4% of Portuguese CEOs do. Naturally, this finding may be related to the CEOs’ relatively lower educational level, while it may also be related to access to funding and other type of public or private support for R&D in small firms.

It is emphasized that all the reported scores are subjective scores as responded by the CEOs when filling out the web-based survey. The scores may even be influenced by the CEOs of the various samples’ interpretations and understanding of the wording of the questions. To counterbalance possible measurement-problems, all questions have been rigorously reviewed by native researchers in an attempt to limit the impact of cultural interpretative differences and translation to different languages (Norwegian, Spanish, Portuguese).

Future research
When the data for Spain become available, the next phase of this research is to empirically test the conceptual model on the samples from Portugal and Spain with the objective of determining whether or not the model is a general model or not.

The analysis will be extended with in-depth interviews with a selection of small firm CEOs from both internationally active and firms which not yet is contemplating internationalization to gain further understanding of the cognitive triggering mechanisms. What makes one small firm CEO include international markets in his or her strategic toolbox while another does not? What are the triggers for formation of a global mindset in a small firm and what hinders small firm CEOs international orientation? Which resources and capabilities are most important in the strategic contemplation of internationalization in small firms and how may this process be better facilitated?

Granted that the majority of firms in any nation is small firms and that all big firms started small, this appears to be a highly relevant line of research.

**Weaknesses in the present research approach**

The research design is cross-sectional and each national sample has a different selection of industries and sectors reflecting its economy. As a result of this and the use of a survey instrument for data collection, only a snapshot view of the targeted sample is obtained in each market – i.e. a snapshot view of the firms’ activities and status of processes at the time of the survey. This approach is in line with similar studies (Nummela, Saarenketo and Puumalainen,
2004; Baird et al, 1994; Andersson et al, 2004), however, one should be aware that this design may limit the strength of the conclusions about the (causal) relationships outlined in the conceptual model. Conscious efforts are made to firmly base all constructs on existing theory while at the same time extending past research with empirical testing of the conceptual model in new samples. This recognized weakness in design will be reduced by triangulating quantitative- and qualitative data and methodology in future extensions of this research.
References:


Business ability of the client-organization’s manager(s) as a criterium for bank managers when they repute their client-organizations

Results from an empirical study

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Business ability of the client-organization’s manager(s) as a criterium for bank managers when they repute their client-organizations

Results from an empirical study

Abstract

Is the business ability of the client-organization’s manager(s) very relevant for the sample bank managers in their role to repute client-organizations?

The current paper tries to find an answer to this question.

An empirical research (438 respondents) enabled us to determine the main criteria adopted by bank managers from Aveiro and Porto and conclude that the business ability of the client-organization’s manager(s), although important, is not a critical criterium for this sample.

Such knowledge helps companies on decisions about policies and practices as concerns bank managers and informs bank managers about their colleagues perceptions on the importance of their client’s manager(s) business ability.

Keywords: bank managers, corporate reputation criteria, business ability of manager(s), organizations.
Emerging Market SME Turnaround and Growth in a Recession: Theory and Practice

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The author of this developing paper, a senior industry practitioner, reviewed literature on SME turnaround with the aim of applying the learning in order to achieve a “first time right” outcome to a high profile turnaround initiative. The initial disappointment stemming from gaps in the research and vagueness of definition was replaced by excitement given its diversity and an unexpected outcome, where what was found would challenge the author’s thinking about SME turnaround to the point where he is beginning to question whether the subject of SME turnaround is a valid concept.

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Introduction

This developmental paper is an outcome of the author having been tasked with implementing the turnaround of a financial services SME on behalf of its shareholders in the role of CEO, and to grow the SME further into the markets it serves. These opportunities proved to be the perfect basis from which to consider turnaround theory with respect to the practical execution of the turnaround, and to consider SME growth and development theory against the practice of growing the SME both during and after turnaround.

As a result of the project above, gaps are beginning to be found in the literature in as far as turnaround in emerging market SME's are concerned, and also in as far as research into turnaround during a recession is concerned. These gaps highlight potential research opportunities as various aspects of turnaround are not equally researched. For example, Pandit (2000:51-52) notes that previous turnaround research questions have often highlighted the content of turnaround strategies, but work
relating to the context and the process of turnaround are rare. This is unfortunate as the requirements for turnaround – establishing accountability, conducting diagnostics, setting up information systems, preparing action plans, taking action and evaluating results – have been part of the literature since at least the 1980’s (Boyle and Desai 1991:33). The contextual matters Pandit refers to are topics such as the severity of the crisis, the attitude of shareholders, and the historical business strategy, while the process matters relate to topics such as the identification of triggers that begin the turnaround process and the identification of sequences of successful recovery actions (Pandit 2000:52), discretionary activity that can be taken to ensure that failure is not inevitable, and that turnaround can be effected (Chowdhury & Lang 1993:8).

From a practitioner perspective, the research gaps may add weight to learning from other's experiences, whether they be positive or negative. Even more, since the problems facing entrepreneurs in developing countries are often quite similar (Benzing, Chi and Kara 2009:63), there is perhaps an increasing transferability of knowledge and experiences across the borders of developing countries, where one of the biggest research gaps exist. However, practical insight in turnaround remains valuable because, as O’Kane (2006:118) notes, a criticism of turnaround research is that it offers results that are unconvincing and of little assistance to turnaround managers, offering support to the point made about gaps in the literature, in this case, in terms of their practicality. This paper may therefore begin to contribute to improvements in understanding the actual actions required for turnaround (Spremann 2004:14), a topic which has received little systematic attention (Latham 2009:182).

Finally, given the high incidence of small enterprise failure globally and the apparent failure of turnaround research in practice, could government support for SMEs be further enhanced as a result of research-practice oriented papers and shared experiences? Since SMEs are usually more vulnerable to financial distress when compared to large firms as is evident by their high mortality rates (Chowdhury
& Lang 1993:8, Boyle & Desai 1991:33), any interventions helping to reduce the failure rate of small business would be helpful. Indeed, it could be that practical experiences have a potentially more important role to play in SME development, if only there was an appropriate way to channel these experiences to practitioners? These are very important questions in practice when one considers that South African startup businesses are the least likely of developing countries to mature beyond three months, and only 25% of them make it beyond 42 months old, compared to 89% in Brazil, another developing country (Von Broembsen et al 2005:19-20).

**Purpose**

At the start of his turnaround process, the author simply expected that there might be value to be gained from reviewing the current academic literature on the turnaround landscape, that it would enable a greater chance of getting a “first time right” outcome as a result of applying the learnings gained from the research. However, as the author studied the literature, he instead found it lacking in both depth and content, at least in as far as his particular case was concerned – an emerging market SME in a recession – which gave rise to this paper in development, as an attempt to begin to highlight these gaps and to demonstrate the apparent failings of research in as far as their value to practitioners is concerned.

**Background**

The original strategy of the business (the SME was established in May 2005) was simply to create a viable micro-lender in South Africa. Micro-lending is a category of financial services to low income customers, ‘… where the unit of transaction is usually small …, typically lower than the average GDP per capita’ (Isern and Porteous 2005:1), while South Africa is a developing country and an emerging market (Smith 2006:168). To realise the strategy, the business sold unsecured micro-loans to a target market, at that point assumed to be homogeneous in their need for credit, by means of a
single channel – inbound telesales. The upper limit of the loans was about USD2,000 over a term of 24 months, while the target market was defined to be the mass middle market having an average monthly income of about USD650. Product-centric advertising was conducted in media that included press and television. At this time, the SME had a staff complement of 89.

The problem expressed by the previous management team, was simply to generate enough sales to reach break-even. The business already had about 14,000 customers, but it was highly unprofitable and had yet to break even. The author analysed the business in terms of both its operating model and its business model, summarizing the major organizational challenges to be addressed as follows:

- In an unsuccessful attempt to differentiate itself (from the perspective of being able to generate larger volumes), the unsecured personal loans were priced at 6% below the competition irrespective of the increased risk of default of the target market

- Advertising expenditure was significant, at about 40% of revenue

- The market was defined as the mass middle market, between The South African Advertising Research Foundation's (SAARF) Living Standards Measure (LSM) 3 and 6. Research conducted in conjunction with an international advertising agency indicated that our customers were actually LSM 5 to 7, meaning that management had been targeting the wrong customers

- The SME employed 89 people at the time, and none had job descriptions, performance contracts or key performance areas to perform against. Morale was low due to multiple restructuring initiatives, and there was no employee value proposition. Staff development opportunities were non-existent, and management was autocratic. There was no marketing role, and IT was relegated to a middle management role. Finally, there were significant cultural differences between the author as the new CEO and the current management team, with the major difference being in communication style of the new CEO, which was highly informal fitting the 'Generation Y' employment profile of the majority of staff

- No processes were documented. Turnaround times between loan application and loan decision took up to five days whereas the competition could do it within a day. There was no Information
Technology (IT) specification and its implementation was undocumented. Furthermore, the system was unstable, fraught with manual workarounds, and had reached capacity. The IT vendor was invoicing for 'work done', unchecked, resulting in over-billing. There were no systems change processes. Channel- and back office operations were indistinguishable, which meant that it would be difficult to add new channels to the business without major cost.

- From a facilities perspective, the buildings were large and expensive compared to the income being generated by the business, with plenty unused space. Backup power supplies were unreliable, and the facility was the target of regular break-ins.

- Funding was however secure, being provided by the SMEs shareholders, and legislative requirements were largely in order.

From the above, it became clear that the bulk of the challenge was in the operating model, with a secondary challenge in developing the business model. This is because the operating model, besides being highly inefficient, was already at capacity as was demonstrated at a board meeting, i.e. no matter how much better the business model would become, the operating model would be unable to deliver.

**Developing a Theoretical Context for Turnaround**

The theoretical context of this paper examines a number of important attributes in turnaround theory, although it is not a conclusive review at this point.

The review begins with a short exploration of what turnaround means. It became apparent that the term 'turnaround' does not have a clear definition in the literature. This vagueness makes it difficult to measure the success of turnaround. The review then moves on to consider the role of finance, probably the most important resource in the business as without financial resources, a business would not have the wherewithal to operate, and it has become almost traditional to speak of a lack of financial resources as being almost the ultimate barrier to SME development. The review continues, exploring some of the issues surrounding turnaround in developing countries and in a recession, noting gaps in...
the literature in as far as SME research in an emerging market in a recession is concerned. The review then proceeds to turnaround strategy, followed by a review of turnaround implementation. It will have been noted at this point that nothing can get done without people – without leadership and appropriate management, and without people doing what needs to be done to effect the turnaround. Finally, the review closes off with an emerging counter-argument for the concept of SME turnaround, perhaps beginning to shed light on why there seems to be limited research on SME turnaround. Let us now consider the literature.

**What Does Turnaround Mean?**

Finding a standard definition for 'turnaround' seems to be a difficult task because many authors have failed to provide appropriate definitions to guide their research, depending instead on the readers’ general understanding of the term (Pretorius 2009:4). For the purposes of this paper, Pretorius’ research aimed at determining the definitions of ‘decline’, ‘failure’ and ‘turnaround’ has been used, from which the following definitions of ‘turnaround’ and ‘decline’ have been proposed (Pretorius 2009:10-11):

_A venture has been turned around when it has recovered from a “decline that threatened its existence”, to resume normal operations and achieve performance acceptable to its stakeholders (constituents) through reorientation of positioning, strategy, structure, control systems and power distribution. Return to positive cash flow is associated with achievement of “normal operations”. A venture is in decline when its performance worsens (decreasing resource slack) over consecutive periods and it experiences distress in continuing operations. Decline is a natural precursor in the process to failure._

Furthermore, Pretorius adds that ‘decline’ implies operating under distress, which, if the causes are corrected, leads to continued operation. Associated terms include ‘underperforming firms’ and ‘technically insolvent’ firms (Pretorius 2009:11).

**The Role of Finance in SME Development and Turnaround**

While access to finance is often cited in the literature as a driving factor of SME growth (e.g.
Morgan 2010; Agrebi 2009; Watson, Newby and Mahuka 2009:46; Beck and Demirguc-Kunt 2006; Lafferty 2005), access to finance is often constrained due to lack of collateral or a trading track record that is too short (Rutherford et al 2001:67). However, McPherson and Rous (2010) for example show the importance of other factors to SME growth other than finance. Even a cursory review of the literature shows that the reasons for constrained growth could be almost anything from ownership structure (Niskanen and Niskanen 2010; Abor 2008), to gender discrimination (Watson, Newby and Mahuka 2009), to the development of a meaningful mission statement and a relevant strategic operating context (Analoui and Karami 2002), to how familiarity stifles SME development (Sears 2001) and even to the individual characteristics of the entrepreneurs (Širec and Močnik 2010).

As a case in point, this study is of an SME that has sufficient access to capital, yet that still found itself unable to grow. Lawrence (2008:89-90) notes that undesirable business outcomes are likely when there is a mismatch between how resources (such as finance) are deployed and the competitive priorities of the business, and also notes that this is an area of scarce research. Resources are described here are being the basic factors of production (Lawrence 2008:93) that are combined to produce knowledge and capabilities. Given the above, the challenge of finance exists, perhaps even to a greater degree, in the case of turnaround - Smith and Graves (2005:304-305) note that it would be useful to have a model “that could identify distressed companies that have recovery potential”, which would be useful to lenders to determine whether to continue providing credit to the company.

**Turnaround in a Recession and in Developing Countries**

The challenge of turnaround is more complex in a global recession, possibly one of the worst since the 1930s, with the world in a “prolonged slowdown of unpredictable duration” (Reeves & Deimler 2009:10). While turnaround in a recession is not a new area of study, little has been written on the topic (Latham 2009:180-181). Furthermore, little has yet been written about turnaround in the
context of the global economic crisis which peaked in the United States during September 2008, which saw the collapse of many US banks (Hinton 2009).

The global recession impacted developing countries through declines in flows such as foreign direct investment, export revenue and tourism income. The resulting economic contractions saw significant job losses, and also South Africa’s first recession since 1992 (Gable et al 2009:1). That the SME in question sold credit simply compounded the strategic complexity in an environment where credit was in crisis globally, with the latter fact resulting in significant change within the global financial services industry. For example, while Baumgärtner et al (2009:1) speak of some of the more permanent outcomes of the global financial crisis being higher capital costs and lower leverage, specifically in investment banking, it is probably true of banking in general. The immediate implications of a lower gearing is a higher equity structure and higher weighted average cost of capital, which in turn puts pressure on the Return on Equity expectations of the shareholders.

In ultimately wanting to collaborate theory with the actual practice of turnaround, the first challenge encountered was that primary data on turnaround is scarce for businesses in developing countries (Pretorius 2008:20). Furthermore, even though much has been written about the turnaround in general over the last three decades, Chowdhury (2002:263) suggested that there is still insufficient knowledge about turnaround. Findings like these challenge the author's objectives.

**Turnaround Strategy**

Turnaround strategies can be classified into two groups (Smith and Graves 2005:305, Harker and Sharma 1999:37) – efficiency strategies and entrepreneurial strategies (Smith and Graves 2005:305). Smith and Graves describe efficiency strategies as those rectifying inefficient operations, i.e. about cost-cutting and asset reduction, while they describe entrepreneurial strategies as those that
reposition it with respect to its current or even its new markets. Smith and Graves (2005:306) quote extensive research on efficiency-oriented strategies, where the common argument was that efficiency-oriented recovery strategies are essential for any successful turnaround. However, given the scarcity of equivalent research in SMEs, we get a hint of the added complexity of SME turnaround in a recession from Latham (2009:181-183) who states that the strategic response from business is more complex in a recession, with the consequences of that complexity often more dire for small business, and that small business responds differently to a recession compared to large business because large business tends to react by cutting costs while small business tends to react by market segmentation tactics. Boyle and Desai (1991:39), in their paper on SME turnaround, observe that most of the causes of failure seem to be internal to the firm, with a major reason for failure being lack of management practice (Lawrence 2008:89), with the key missing element being lack of control over operations, without which business has little chance of long term survival in a competitive market (Boyle & Desai 1991:40).

Complementary to the above, Pretorius (2008:21-22) writes that the cause of decline or failure is often classed as either strategic (external) or operational (internal) in nature. While it is easier to respond to operational challenges than to strategic positioning challenges, strategic challenges require quicker action. Furthermore, Pretorius suggests that turnaround is generally less severe if it is due to operational weaknesses, because they can be corrected with relative ease and visibility, while strategic challenges require directional change and high-risk expectations typical of new venture creation. An incorrect, albeit new strategy, could therefore have disastrous consequences for the business.

Beyond turnaround strategy, successful, sustainable turnarounds usually involve substantial strategic repositioning of the business (Gadiesh, Pace & Rogers 2003:42). The strategy is based on leadership having a clear point of view of the future, and by evolving the business model in line with this. Equally important however is that the operating model evolve to support the growth strategy
outlined by the business model (Kapur et al 2006:11).

**Turnaround Implementation**

Studies on strategy implementation are lacking (Getz, Jones & Loewe 2009:18; Sharma 2009:iii; Khadem 2008:29; Moore 2008:3, Parnell 2008:1278, Gumbus & Lussier 2006:407). This is a distinct gap because the effectiveness of a strategy depends on both its formulation and its implementation. Ulrich, Brockbank and Johnson (2009:25) even suggests that the implementation of strategy may be more important than the strategy. Indeed, Caruth & Humphreys (2008:24) not only point out strategy implementation as a source of competitive advantage, but also that the best planned strategy is ineffective without implementation.

The Balanced Scorecard is “one of the most touted management tools today”, with Harvard Business Review identifying the Balanced Scorecard as “one of the most significant management ideas of the last 75 years” (Gumbus & Lussier 2006:407) in terms of its aid in strategy implementation. While research on the implementation of the Balanced Scorecard in SMEs is rare (Gumbus & Lussier 2006:408), it is a valuable concept because it enables the measurement of total business performance beyond only financial measures as is common to SMEs (Birch 1998:43), and it addresses the concern that financial measurement alone is inadequate for measuring restructuring and turnaround (Chow, Haddad & Williamson 1997:21). The benefit of the Balanced Scorecard is that it provides a framework for translating strategy into action by measuring the progress towards achieving strategic goals (Gumbus & Lussier 2006:408-409). Furthermore, it can benefit SMEs as much as large corporates benefit from it (Birch 1998: 43, Gumbus & Lussier 2006:422).

While more research on the role of technology in turnaround is required, it is one of the primary means to execute and implement business strategy. Its role is more valuable than this though as most
business innovations occur as an interaction of market insight and technological know-how, making technology an important strategic input rather than just being an enabler (Berman & Hagan 2006:28).

**The Role of Human Resources**

Employee productivity is one of the most important predictors of small business turnaround (Lawrence 2008:93), as is employee morale (Gadiesh, Pace & Rogers 2003:42). For a strategy to succeed, it must begin with people with ability, i.e. a strong management team (Gadiesh, Pace & Rogers 2003:42), although a change in top management is not necessarily the cause of turnaround as is often presumed in the literature (O’Kane 2006:117). In terms of the role of people in the execution of strategy, Moore (2008:4) writes that people generally do what they are rewarded to do. When there is confusion, the link between strategy and execution is compromised.

Smith and Graves (2005:306) found significant research that suggested that changes to the senior management team were an important step towards enabling a successful recovery, since in many cases, it was found that the incumbent management were unable or unwilling to make the changes necessary to stem the decline. Further to this, Harker and Sharma (1999:37) refer to research that demonstrate that successful turnaround requires leadership that is not only transactional, but that is also transformational, the latter being a quality that may be required but that may not actually be present in the incumbent management team. Daft (1994:499) describes transformational leadership as that being able to take a company through revitalization or major strategic change, which, as we are seeing here, is an important component of turnaround. Harker and Sharma (1999:44) found that successful turnaround leaders were energetic and took action on many fronts, were disciplined in terms of measurement and analysis, and were open-minded and willing to experiment and learn. Abebe (2009) found empirical support for the upper echelons theory that emphasises leadership characteristics as predictors of organisational performance, but even more, that long tenure had a strong, adverse
influence on organisational performance. The adds weight to the general feeling that to take a business forward, top management needs to be changed.

Because of the need to address issues like reward, staffing and training in the process of strategy execution, HR are important contributors to the strategy process, as the market requires HR to also be aware of issues relating to customers, investors and communities in order to ensure that the strategy is correct (Ulrich, Brockbank & Johnson 2009:25).

From a culture perspective, while Choueke and Armstrong (2000:236) were aiming to find an answer to the question of whether culture is a missing perspective on SME development, there was also acknowledgement that this was a difficult area to research given that there is difficulty agreeing what “corporate culture” is. However, they did find research that supported the idea that culture is important in the success of their organizations. Associated with culture is the issue of improving company morale as an important part of business turnaround, communicating a simple and powerful set of messages to employees, repeatedly (Gadiesh, Pace & Rogers 2003:42), as successful turnarounds develop organization-wide conviction that translates intent into action (Kapur et al 2006:11).

Research has indicated that properly aligned human resources are key to the successful implementation of strategy, so it makes sense that a human performance appraisal process should meet the organizational needs of all stakeholders (Caruth & Humphreys 2008:24-25). This is again where the Balanced Scorecard concept has value, because it proposes a framework of measures applicable not only to financial stakeholders, but also to stakeholders such as employees, customers and employees.

**Business Life Cycle Theory**

Given that the business had reached productive capacity, could it be that the apparent turnaround project was actually less about turnaround and more about business growth? The
development and growth of businesses has been an area of interest to researchers for decades (Lester & Parnell 2008:540). Business life cycle theory is popular in the literature, reflected in as little as three stages to as many as ten, with life cycle models specific to both small and large firms having been developed. The strongest empirical support seems to support five stages or less (Lester & Parnell 2008:540-541). Business life cycle theory is interesting because it considers the problems businesses encounter as they grow, providing insight into the options facing businesses at various points in time (Hill, Nancarrow & Wright 2002:362-363). According to Lester and Parnell (2008:542-544), the major stages are:

- **Existence**, where the business is focused on viability, with decision-making and ownership in the hands of one or few, with a simple organizational structure

- **Survival**, where the business is increasingly formalized and distinctive competencies are established. The main goal is to generate sufficient revenue to maintain operations. Most are structured functionally, with decision-making increasingly decentralized

- **Maturity** sees business formalisation and control as the norm and increased red tape becoming problematic. Job descriptions, policies and procedures and hierarchical relationships become more formal. Some become more market defensive rather than maintaining market aggression. Top management focus is on planning and strategy

- **Renewal** has business wishes to return to leaner times, to innovation and to creativity. Decision-making is increasingly decentralized, with increased customer-centricity

- **Decline**, where business experiences a lack of profit and a loss of market share
Some of the major differences between large and small firms can be found in Mtigwe (2005):

**Table 1: Differences between large firms and small entrepreneurial firms from Mtigwe (2005:361)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Small entrepreneur</th>
<th>Large firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning orientation</td>
<td>Unstructured/operational</td>
<td>Structured/strategic</td>
</tr>
<tr>
<td>Flexibility</td>
<td>High</td>
<td>Structured/strategic</td>
</tr>
<tr>
<td>Growth absorption capacity</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Risk orientation</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Managerial process</td>
<td>Informal</td>
<td>Low</td>
</tr>
<tr>
<td>Learning and knowledge absorption capacity</td>
<td>Limited</td>
<td>High</td>
</tr>
<tr>
<td>Impact of negative foreign market effects</td>
<td>More profound</td>
<td>More manageable</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>Human capital-centered</td>
<td>Organisational capital-centered</td>
</tr>
</tbody>
</table>

Building on Table 1, Appiah-Adu, K., and Singh, S., (1998:387) write that SME’s are characterized by simpler organizational structures and more cohesive cultures, a limited range of products and customers, minimizing the requirement for formal procedures for gathering and analyzing customer information. According to Eirich (2004:16), for a business to move from being small to being medium, it needs to overcome at least five hurdles:

- access to capital
- growing from a small market presence to a larger market presence
- increasing the skill of its labour force
- increasing its access to cutting-edge technologies
- developing a unique value proposition

An interesting question in business life cycle studies concerns the factors that drive a business out of one life cycle phase and into another. It seems that it depends on management’s ability to solve problems brought on by past levels of growth that allows a business to survive and to grow (Rutherford et al 2003:327). Chen and Hsieh (2005:157) state that it is management’s decisive actions taken on
specific critical issues that results in the transition from one stage to another, and that how these are addressed is key in the success or failure of the organisation. Expressed differently, Flamholtz and Hua (2002) speak growing pains that will be experienced by most businesses as they grow. Their belief is that these growing pains are experienced because the business infrastructure has not kept pace with the size and complexity of the growing business, with the size of the business measured as revenue. They suggest that for every doubling in size of a business, the business requires a different infrastructure to support its operations (ibid. 527,530). While these growing pains occur in businesses of all sizes, they are most characteristic of early stage entrepreneurial businesses, and have an impact on the financial performance of the business (ibid. 534).

Note that in spite of a proliferation of business life cycle models, while the metaphor provides a good conceptual base for explaining business development, the existence of a general life cycle model has not been proven (Beverland and Lockshin 2001:354).

**Customer Centricity**

Eirich’s proposal that a hurdle for moving from a small business to a medium business is developing a unique value proposition raises the point that we have spoken little about the customer, yet an increasingly competitive business environment has driven a focus on customers (Appiah-Adu & Singh 1998:387). Indeed, Appiah-Adu & Singh (1998:387) point out that for SMEs who have limited access to resources such as research and development, competitive advantage, low cost leadership or skilled staff to develop effective planning, customer orientation is likely to be a vital determinant of success. Indeed, “products come and go, but customers remain” (Hogan et al 2002:4). Lemon et al (2001:21) state that a significant determinant of the long term value of a firm is customer equity, and that customers, being intangible assets, need to be measured, managed and maximised in order to optimise business performance (Kumar and George 2007:157).
In closing the theory section, it seems that it is resource availability – financial, management, human and/or capacity – each of which depend largely on previous decisions, organizational learning and/or history, that is at the heart of turnaround. These resources, as well as the capacity of the business environment to accommodate the business, determines the turnaround options the business can choose from (Pretorius 2008:21).

**Commentary: Turnaround Theory versus Practice**

Using Pretorius' definitions, could it be that the SME was perhaps not entirely in turnaround, although its existence was threatened, its performance was not acceptable to its shareholders, and it experienced distress in its operations? The fact that it had never been profitable also probably makes it more likely that the business was more likely experiencing its growing pains. However, the fact that unless the business did something differently, it would never become profitable, and indeed, it would probably fail instead. That the business needed a repositioning and was experiencing ever reducing resource slack, would probably position the case as a borderline turnaround case.

Early in its evolution, the business had access to extraordinary financial resources from one of its shareholders. However, it seems the business was not able to apply these resources to the areas of the business that needed it most. Again, there seems to be no literature covering a case of SME development with effectively unlimited financial resources, so do we really know whether a business in similar circumstances will experience the business life cycle any differently from 'normal' SMEs?

That there seems to be so little research on turnaround in SMEs could be seen as a gap and a research opportunity. But is it really a gap, or is it logical that there should be an apparent gap? Do SMEs experience turnaround or are they merely experiencing growth as per business lifecycle theory, especially for a business that would qualify as being in growth phase? On the other hand, the gaps in
general turnaround research in developing economies and during recessionary conditions is another matter altogether, probably qualifying as real research gaps. Of greater concern is that turnaround research seems to have limited practical value, especially from a practitioner perspective.

In terms of turnaround strategy, it was noted that the research referenced efficiency strategies and entrepreneurial strategies, with the former essentially making reference to the operating model, and the latter making reference to the business model. As briefly noted, the priority context in this case was the operating model as it had reached capacity. Interesting also was research that discussed how important it was for the operating model to support the growth strategy, which is an important consideration in practice. This in turn underlined another important business practice – that without a sound operating model, the business model would suffer, no matter how good it potentially was. Further on the operating model, it was noteworthy how much research had been conducted in terms of the role of people, specifically the CEO in turnaround research, not much of which had been considered yet by the time this paper was being written. Also noteworthy was research covering the matter of management practice, especially in operations. Finally, while the operating model was the priority, considerable effort was simultaneously applied to the business model in a strategic repositioning intervention (Pearce 2008), all of which would serve to strengthen the business model, which, as could be seen in the background introduction to the case, was weak.

In terms of implementation, Ulrich, Brockbank and Johnson's suggestion that the implementation of strategy may be more important than the strategy itself rings especially true in this case, as an unfilled operations strategy, even in the midst of increasingly operational human resources-, information technology-, marketing- and financial strategies, almost resulted in the failure of the turnaround. In other words, one of the critical success factors of a turnaround strategy is ensuring active management and measurement of the process, in some instances, even on a daily basis.
Already in the theory section on the role of human resources, what becomes apparent is the depth and complexity involved in this important component of turnaround implementation. Possibly one of the most challenging tasks in the role of CEO in a turnaround is whether to keep the old management team, or to bring in a new one. Of the five-member senior team of the new CEO, within six months, three were new and two were old. Of the three new members, two were brought in to fulfill new senior portfolios in IT and marketing that never existed before, and the other replaced the old financial director who was clearly not up to the task from very early on. Of the two old members, only the HR executive remains now, while the COO left under pressure as change was not being implemented in operations as was required, which almost resulted in the turnaround not happening at all. In terms of the last surviving member of the old team, the HR executive, he has made significant changes to his performance over time. A few short months ago, however, he was almost pressured out of his role due to not performing up to the expectations of the role. The clear experience and learnings for this CEO then is that the old management team must almost certainly be replaced in order to ensure the proper execution of the strategy, failing which the risk of non-execution of the turnaround strategy begins to increase significantly. This experience also seems to hold at the management levels in the organisation, where managers holding on to the old could significantly constrain the execution of the strategy. Possibly one of the best ways to manage at this level is by proper performance management, which, as was mentioned in the background section, was not in place in this SME. It is now increasingly in place, and active performance management is now increasingly helping to thin out under-performing managers and supervisors, in line with the expectations held in the execution of the new strategy.

**Key Finding, Next Steps and Conclusion**

While the case for turnaround in this case may be in question, the larger question is whether an
SME can ever be in turnaround, or whether it simply experiences growing pains and that it requires transformational management decisions to be taken in order to pull it over the various impediments to growth it is likely to encounter. If this is true, then it becomes clear why there are gaps in the literature in terms of SME turnaround. However, when one realises the likelihood that the business could fail if significantly transformational decisions were not taken in time, then perhaps it is also true that some sort of turnaround has been affected. In any event, there seems to be an applicability of turnaround research to SME development, which may indicate possible value to be had in a convergence between these two streams.

The next steps are to continue with the literature review, expanding particularly on the role of people in turnaround, on the role of resources in the repositioning both the operating model and the business model, and on business development through its life cycle. It is probably unlikely that any value will be gained by continuing the search for SME turnaround research, given the assessment that SME 'turnaround' may actually be a red herring in the context of an SMEs development. The author suggests that a research paper, using the staff of the SME as survey participants, will provide invaluable insight into the process of turnaround and SME development, an element that was identified as a research gap in the theory section. This research should also provide a little more insight into whether turnaround is best conducted with a new management team, and if not, what needs to be done to ensure that the old management comes on board with minimum implementation risk.

In conclusion, a key question to be asked by practitioners is whether an investigation of theory has added any value to the task at hand. In the beginning, it was a little discouraging, with no relevant and useful information seeming to come forward to help with the task at hand. However, as the research scope started to expand, the world of turnaround and SME development seemed to take on a whole new life, with some quite insightful pieces coming through on strategy, implementation, human
resources, and the business life cycle. The latter has been such a positive experience that I would encourage other practitioners to consider a similar path whenever they come to address some of their greater business challenges.

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The research questions in this piece of research are the following: how do participants perceive their entrepreneurship-related learning experiences in terms of various emotional and motivational changes? How do learners tell us various stories about their lived experiences (Harmeling, 2006 based on Dewey, 1938; 1997) in a self-regulatory learning (SRL) perspective (Zimmerman, 1989; Zimmerman and Schunk, 2001)? The study shows how learning changes affect persons (and teams as well) during an entrepreneurship educational setting based on a situated learning framework; and particularly to the three core dimensions involved in effective ‘authentic’ learning (Brown et al., 1989; Donovan et al., 1999): knowing, acting and being. Findings discuss how SRL is a developmental process, how the “self” aspect is crucial, and how motivation plays a key role in SRL.

Keywords: entrepreneurship education, self-regulated learning, authentic learning, lived experiences, self, motivation
Technological Determinants of Entrepreneurship Performance∗

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Abstract

In this paper we acknowledge the role of technology as an engine in fostering entrepreneurship. We examine the technological determinants of entrepreneurship performance in twenty three developed OECD countries during the period 2000-2007 using two measures of entrepreneurship performance: the number of newly registered corporations, which is introduced by the World Bank Group Entrepreneurship Survey 2008, and the number of new enterprises, which is introduced by the OECD Structural and Demographic Business Statistics. Results of the mixed-effects model suggest a positively and significantly relationship between the intensity of cellular phones, patent applications, and computer and communications services on entrepreneurship performance while the impact of personal computers ownership is found to be inconclusive.

Key Words: Entrepreneurship Performance; Technological Changes; Patents; Mixed Effects Model

I. Introduction

It has been widely recognized that successful entrepreneurship fosters the production of wealth for a nation, creates jobs, increases the standard of living of the society and contributes to political and social stability, innovation and economic development (Postigo and Tamborini, 2007). Many governments are trying to promote new business start-ups hoping for an economic well-being (Wennekers et al., 2005). Faria et al. (2008) stated that there exists a relationship between entrepreneurship and

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unemployment. When new startups hire workers, unemployment will fall. When unemployment is high, startup activity will increase.

Recently, a great attention is placed on exploring the main factors that determine entrepreneurship performance. According to the OECD-Eurostat Entrepreneurship Indicators Program (2009), the determinants of entrepreneurship are: Regulatory framework, Market conditions, Access to Finance, R&D and Technology, Entrepreneurial capabilities and Culture.

In this paper, we examine the technological determinants of entrepreneurship performance in twenty three developed OECD countries during the period 2000-2007\textsuperscript{1}. Empirical results show that in the first model specification, where the number of new enterprises is used as a measure of entrepreneurial activities, shows that entrepreneurship performance responds positively and significantly to the intensity of cellular phones, patent applications, and computer and communications services while it is found to respond negatively to personal computers ownership intensity. The intensity of cellular phones is found to have the strongest impact over all other technology variables. On the other hand, the second model specification, where the newly registered corporations is used as indicator of entrepreneurial activities, shows similar results to the first model except that personal computers intensity turned to have a positive impact on the number of new corporations and also the strongest impact on entrepreneurship performance among all other technology variables.

\textsuperscript{1} The sample of study contains the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hungary, Iceland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, the United Kingdom and the United States.
The rest of the paper is organized as follows: section II discusses the literature, section III introduces the different measures of entrepreneurship performance, section IV presents the econometric model and the data, section V explores the empirical results, and the final section VI presents the concluding remarks.

II. Literature Review

Entrepreneurship is a complex and multidimensional concept (Si et al., 2007). In the past two decades, several studies focused on surveying the determinants of entrepreneurship and examining the impact of these determinants on entrepreneurship performance. For example, Sorensen and Chang (2006) extensively reviewed and evaluated the academic literature on how entrepreneurial performance depends on the characteristics of entrepreneurs and entrepreneurial teams. They have discussed a number of conceptual and methodological issues in the study of entrepreneurial performance.

Si et al. (2007) stated that there exist two categories of factors influencing entrepreneurship, namely, the factors that influence the industrial structure and the diversity of consumers’ tastes, such as technological development and the various structural characteristics of the population such as the labor market.

According to Gompers et al. (2008), first-time entrepreneurs have only an 18 percent chance of succeeding, and entrepreneurs who previously failed have a 20 percent chance of succeeding. Sandberg and Hofer (1987) examined the determinants of new venture performance. They found that industry structure, venture strategy and the characteristics of the entrepreneur are influencing the new venture. On the other hand, Hochberg et al. (2007) have shown that companies that are funded by more experienced (top-tier) venture capital firms are more likely to succeed.
Leitão and Franco (2008) examined the importance of human capital and organizational capital on entrepreneurial performance. They found that entrepreneur’s intuition and propensity for innovating activities are the significant human capital determinants of his success. Similarly, the results of Audretsch and Keilbach (2004) indicate that entrepreneurship capital is a significant and important factor shaping output and productivity.

Henriquez et al. (2001) have studied the factors that have had a major impact on the development of entrepreneurship in France within the period 1960-1998. They found that the high level of unemployment was accompanied by a lack of entrepreneurship opportunities, the government intervention tended to favour the large companies, and technological advancement helped large businesses to gain competitive advantage.

Grilo and Thurik (2004) have studied the determinants of entrepreneurship in 15 European countries in 2002 and 2003 from an eclectic approach. They found that the lack of financial support has no discriminative effect across the various levels of entrepreneurial engagement.

Fairlie (2005) have explored the relationship between computer ownership and entrepreneurship in the US between 10997 and 2001. His results provided evidence that exposure to home computer may make it substantially easier for a potential entrepreneur.

Van Stel et al. (2004) used the Global Entrepreneurship Monitor (GEM) database to explain cross-country variation in entrepreneurship. They found that nascent entrepreneurship depends various non-economic conditions in the domains technology, demography, culture and institutions, influencing opportunities, resources, skills and preferences.
Si et al. (2007) studied the factors influencing entrepreneurship in India. They found FDI and patent protection are the main factors influencing entrepreneurship and innovation. The added that India needs to take into account the role of entrepreneurs and innovation if it wants to improve its economy.

### III. Measurement of Entrepreneurship Performance

Kukoc and Regan (2009) stated that “Modern definitions of entrepreneurship emphasise a strong link between entrepreneurship and innovation. Entrepreneurship is seen as a critical link between new knowledge and economic growth as it facilitates the transfer of knowledge. These factors distinguish entrepreneurship from more simple forms of management and ordinary business activities.”

Desai (2009) discussed the challenges and difficulties associated with measuring entrepreneurship in developing countries which are further complicated by institutional environment. Parker (2008) discussed the existing measures of entrepreneurship for the purpose of making international comparisons. These measures are put in place according to the definition of entrepreneurship. The first definition (self-employment) can be implemented using the OECD Labour Force Statistics data. The second definition (the formation and operation of new firms) is implemented in the GEM. Other database we can cite COMPENDIA which contains two-yearly data on the number of non-agricultural business owners and the size of the labor force for twenty three OECD countries (Van Stel). Desai (2009) added to this list of databases the World Bank Group Entrepreneurship Survey (WBGES) which measures the number of new officially registered limited liability corporations (LLCs).
IV. The Econometric Model

Methodology

We apply a mixed-effects model to estimate the impact of the following technology variables on entrepreneurship performance: broadband access (broadband subscribers per 100 people), patent applications, computer and communication services as percentage of commercial services exports, personal computers intensity (personal computers per 100 people), cellular phone intensity (cellular phones per 100 people), and intensity of mobile and fixed-line phones (mobile and fixed line phones per 100 people). Entrepreneurship performance is measured in two ways: first, the number of new enterprises per year and, second, the number of newly registered corporations during a calendar year. The choice of the explanatory variables is partially based on the OECD Entrepreneurship Indicators Program measures of entrepreneurial performance.

The mixed-effects model is usually used when data is clustered in some manner, which is applied on data used in this paper since technology variables are clustered within country. The mixed effects model could be outlined using the following structure:

\[ y_i = X_i \beta + Z_i u_i + \varepsilon_i \]

for \( i = 1, \ldots , M \), independent panels consisting of \( n_i \) observations, \( y_i \) comprises the rows of \( y \) corresponding to the \( i \)th panel (vector of responses which is patent activities in this paper), \( X_i \) is \( n \times p \) covariate matrix for fixed effects (\( \beta \)), \( Z_i \) is the \( n \times p \) covariate matrix for the random effects (\( u_i \)), and \( \varepsilon_i \) is \( n \times 1 \) vector of errors which is assumed to be multivariate normal. This model allows us to construct a different random regression line (slope) for each country after testing for the need for different intercepts and different slopes. If

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\( ^2 \) Because of data limitation on the number of newly registered corporations and the number of new enterprises, the period of study is limited to 8 years.
covariates are found to have random coefficients, then we can get these random coefficients by combining the random slope with the mean slope for each country under investigation. The following equations show a simple structure of bivariate random-intercepts and random-coefficients models:

\[ y_i = (\beta_1 + u_{1i}) + \beta_2 z_i + \epsilon_i \]  

\[ y_i = (\beta_1 + u_{1i}) + (\beta_2 + u_{2i}) z_i + \epsilon_i \]  

where \( u_{1i} \) is the deviation of country’s \( i \) intercept from the mean intercept \( \beta_1 \) and \( u_{2i} \) is the deviation of country’s \( i \) slope from the mean slope \( \beta_2 \). The intercepts \( u_{1i} \) and slopes \( u_{2i} \) are independent across countries. The random-intercepts model is shown in equation (2) where we have different intercept for each country but only one slope \( (\beta_2) \), while equation (3) explains the random-coefficients model as both the intercept and the slope are different in each country. The choice of random-intercepts versus random-coefficients model depends on the likelihood ratio test of the hypothesis that the random-intercepts model is nested in the random-coefficients model.

Data

As mentioned earlier, we use country-level data on technology variables in twenty three developed OECD countries over the period 2000-2008. Data is collected from three main sources: the World Bank Development Indicators (WDI), the World Bank Group Entrepreneurship Survey 2008 (WBGES), and the OECD Structural and Demographic Business Statistics (SDBS) Database. All variables are in logs. The first dependent variable, the number of new enterprises, is collected from the OECD Structural and Demographic Business Statistics (SDBS database). Due to data limitations, we use the number of new enterprises in the manufacturing sector in the twenty three developed
OECD countries under investigation. The number of newly registered corporations, the second dependent variable, is collected from World Bank Group Entrepreneurship Survey 2008. The choice of the twenty three countries under investigation depends on the availability of entrepreneurship data for each country in both databases (SDBS and WBGES). Table 1 contains the statistical description of the variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>New enterprises in the manufacturing sector</td>
<td>169</td>
<td>103394.2</td>
<td>947</td>
<td>560882</td>
<td>133011.6</td>
</tr>
<tr>
<td>Newly registered corporations</td>
<td>171</td>
<td>68499.53</td>
<td>1871</td>
<td>676830</td>
<td>107897.9</td>
</tr>
<tr>
<td>Computer and communication services as percentage of commercial services exports</td>
<td>198</td>
<td>47.88506</td>
<td>9.198239</td>
<td>89.7634</td>
<td>19.38405</td>
</tr>
<tr>
<td>Cellular phones per 100 people</td>
<td>204</td>
<td>89.10561</td>
<td>23.08027</td>
<td>163.0082</td>
<td>24.77081</td>
</tr>
<tr>
<td>Broadband subscribers per 100 people</td>
<td>198</td>
<td>12.63111</td>
<td>0</td>
<td>37.10015</td>
<td>10.37052</td>
</tr>
<tr>
<td>Personal computers per 100 people</td>
<td>158</td>
<td>45.35152</td>
<td>6.869705</td>
<td>94.33673</td>
<td>20.89625</td>
</tr>
<tr>
<td>Patent applications</td>
<td>177</td>
<td>26945.07</td>
<td>15</td>
<td>384201</td>
<td>79340.49</td>
</tr>
<tr>
<td>Mobile and fixed line phones subscribers per 100 people</td>
<td>202</td>
<td>140.5519</td>
<td>54.59008</td>
<td>221.8802</td>
<td>25.64653</td>
</tr>
</tbody>
</table>

The main difference between the OECD Structural and Demographic Business Statistics and the World Bank Group measures is that in the later database, entrepreneurship activities are measured by the number of newly registered limited liability corporations only while the OECD measure defines a new enterprise as “a legal

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[SDBS structural Business Statistics defines an enterprise as “a legal entity possessing the right to conduct business on its own; for example to enter into contracts, own property, incur liabilities for debts, and establish bank accounts. It may consist of one or more local units or establishments corresponding to production units situated in a geographically separate place and in which one or more persons work for the enterprise to which they belong”.

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8
entity possessing the right to conduct business on its own”, which sounds to be a broader definition of entrepreneurship activities. Figures 1 and 2 show the trend of entrepreneurial activities in the countries under investigations according to the two measures mentioned above.

**Figure 1**

*The Newly Registered Corporations in 2007 (WBGES Measure)*

![Bar chart showing the newly registered corporations in 2007 across different countries.](chart.png)

Source: Data is extracted from the 2008 World Bank Group Entrepreneurship Survey
V. Empirical Results

The first model specification, where the number of new enterprises is used as indicator of entrepreneurial activities, is estimated using a random intercept framework as explained in equation (2). This is because the likelihood ratio test (LR test) shows that we fail to reject the hypothesis that the random intercept model is nested in the random coefficient model (the $p$-value of the LR test is 0.77). Empirical results show that the number of new enterprises is positively and significantly affected by cellular phones intensity, the number of patent applications, and the computer and communications services, with a point estimate of 0.58, 0.2, and 0.48, respectively. On the other hand, the model shows interesting results regarding the impact of broadband subscription and personal computers ownership on new enterprises. The number of broadband subscribers is found to have the expected positive sign but the impact is insignificant, while personal computers ownership is estimated to have negative and significant impact on new
enterprises with a point estimate of 0.36. This negative impact could be supported by the following explanation: as the rate of personal computer ownership and the skills associated with using them increase among people, the entrepreneurship activities of those people might decrease since their earned income is expected to increase significantly. Besides, workers who use the Internet for job seeking purposes are most likely to find better jobs with higher salaries compared to those who do not use the Internet which, again, makes those workers prefer the wage and salary sector and, thus, decreases entrepreneurial activities. This argument was introduced by many studies such as Betsey Stevenson (2008), Autor, Katz and Krueger (1998), Freeman 2003, Kuhn and Skuterud (2000), and (2004). Table 2 shows the empirical results of the first model specification.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values (STD. Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant ($\beta_1$)</td>
<td>6.1 (0.9)***</td>
</tr>
<tr>
<td>Cellular phone subscribers</td>
<td>0.58 (0.17)***</td>
</tr>
<tr>
<td>Patent applications</td>
<td>0.2 (0.07)***</td>
</tr>
<tr>
<td>Computer and communication services</td>
<td>0.48 (0.16)***</td>
</tr>
<tr>
<td>Broadband subscribers</td>
<td>0.009 (0.02)</td>
</tr>
<tr>
<td>Personal computers ownership</td>
<td>-0.36 (0.11)***</td>
</tr>
</tbody>
</table>

Note:
a. We apply the LR test to determine the best covariance structure for our model (restricted vs. unstructured). The LR test result shows that Prob > chi2 is less than 0.05 in all specifications which means that the unstructured model is more efficient compared to the restricted model and that random effects are correlated. So I apply the unstructured model.
b. Coefficients are significant at *** 1%, ** 5%, and * 10%
Although the individual impact of broadband subscribers on new enterprises is found to be insignificant, we are interested in examining the combined effect of the two complement variables, personal computer ownership and the number of broadband subscribers, on the number of new enterprises. To achieve this goal, we applied Wald test to estimate the impact of the sum of personal computer ownership and broadband subscribers’ coefficients on new enterprises. This test of linear combination of coefficients is examining the following restriction:

\[ H_0: \delta_{pc} + \delta_{bb} = 0 \]

Where \( \delta_{pc} \) and \( \delta_{bb} \) are vectors of coefficients on personal computer ownership and broadband subscribers. Wald test result shows that the combined effect of the two complement variables is negative and significant with a point estimate of 0.37. Again, this supports the same argument presented earlier: the higher the rates of personal computers ownership intensity and broadband subscribers, the lower will be the entrepreneurial activities. The following table, table 3, shows the random deviation and the random intercept for each country as indicated in equation 2.
Table 3
Random Deviations and Random Intercepts
(Dependent variable: Number of New Enterprises in the Manufacturing Sector)

<table>
<thead>
<tr>
<th>Country</th>
<th>Random deviations ((u_{ij}))</th>
<th>Total effects ((\beta_{1i} + u_{ij})) (random intercepts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1.490349</td>
<td>7.666183</td>
</tr>
<tr>
<td>Austria</td>
<td>-0.42617</td>
<td>5.749664</td>
</tr>
<tr>
<td>Belgium</td>
<td>-0.16231</td>
<td>6.013524</td>
</tr>
<tr>
<td>Canada</td>
<td>0.37243</td>
<td>6.548264</td>
</tr>
<tr>
<td>Denmark</td>
<td>-0.63413</td>
<td>5.541701</td>
</tr>
<tr>
<td>Finland</td>
<td>-0.78969</td>
<td>5.386141</td>
</tr>
<tr>
<td>France</td>
<td>1.50774</td>
<td>7.683574</td>
</tr>
<tr>
<td>Germany</td>
<td>0.837986</td>
<td>7.01382</td>
</tr>
<tr>
<td>Hungary</td>
<td>1.038763</td>
<td>7.214597</td>
</tr>
<tr>
<td>Iceland</td>
<td>0.086377</td>
<td>6.262211</td>
</tr>
<tr>
<td>Italy</td>
<td>-1.84392</td>
<td>4.331918</td>
</tr>
<tr>
<td>Japan</td>
<td>-2.44887</td>
<td>3.726964</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>2.093208</td>
<td>8.269042</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-3.34415</td>
<td>2.831686</td>
</tr>
<tr>
<td>New Zealand</td>
<td>-0.0013</td>
<td>6.174534</td>
</tr>
<tr>
<td>Norway</td>
<td>-0.14809</td>
<td>6.027747</td>
</tr>
<tr>
<td>Portugal</td>
<td>-0.88432</td>
<td>5.291514</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>0.91768</td>
<td>7.093514</td>
</tr>
<tr>
<td>Spain</td>
<td>-1.38132</td>
<td>4.794519</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.471</td>
<td>7.646834</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.11064</td>
<td>6.286474</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.581017</td>
<td>6.756851</td>
</tr>
<tr>
<td>United States</td>
<td>1.557073</td>
<td>7.732907</td>
</tr>
</tbody>
</table>

In the second model specification, we use the number of newly registered corporations as a measure of entrepreneurial activities. As indicted in table 4, in contrast with our findings in the previous model, personal computer ownership turned to have a positive impact on newly registered corporations with a point estimate of (0.33), while the intensity of broadband subscribers is still found to be insignificant. In addition, the linear combination of these two variables is estimated to be positive and highly significant with a point estimate of (0.45). This result indicates that the impact of
personal computer ownership on entrepreneurship performance is still inconclusive and
depends on how the measure of entrepreneurial activities. The rest of technology
variables are found to have comparable effect to that indicated in the first model
specification except of computer and communications services which turned to have
insignificant effect. Table 5 shows the random deviation and the random intercept for
each country as indicated in equation 2.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant ($\beta_1$)</td>
<td>6.04</td>
</tr>
<tr>
<td></td>
<td>(1.6)**</td>
</tr>
<tr>
<td>Cellular phone subscribers</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.06)*</td>
</tr>
<tr>
<td>Patent applications</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>(0.07)**</td>
</tr>
<tr>
<td>Computer and communication services</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>(0.2)</td>
</tr>
<tr>
<td>Broadband subscribers</td>
<td>0.049</td>
</tr>
<tr>
<td></td>
<td>(0.034)</td>
</tr>
<tr>
<td>Personal computers ownership</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>(0.14)**</td>
</tr>
</tbody>
</table>

Notes:

a. We apply the LR test to determine the best covariance structure for our model (restricted vs. unstructured). The LR test result shows that Prob > chi2 is less than 0.05 in all specifications which means that the unstructured model is more efficient compared to the restricted model and that random effects are correlated. So I apply the unstructured model.
b. Coefficients are significant at *** 1%, ** 5%, and * 10%
Table 5
Random Deviations and Random Intercepts
(Dependent variable: Number of Newly Registered Corporations)

<table>
<thead>
<tr>
<th>Country</th>
<th>Random deviations ($u_{1i}$)</th>
<th>Total effects ($\beta_1 + u_{1i}$) (random intercepts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>-0.55041</td>
<td>5.498748</td>
</tr>
<tr>
<td>Austria</td>
<td>-2.21342</td>
<td>3.835742</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.269263</td>
<td>6.318423</td>
</tr>
<tr>
<td>Canada</td>
<td>1.085023</td>
<td>7.134183</td>
</tr>
<tr>
<td>Denmark</td>
<td>-0.63826</td>
<td>5.410896</td>
</tr>
<tr>
<td>Finland</td>
<td>-1.27495</td>
<td>4.774209</td>
</tr>
<tr>
<td>France</td>
<td>0.744031</td>
<td>6.793191</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.10027</td>
<td>5.948893</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.411743</td>
<td>6.460903</td>
</tr>
<tr>
<td>Iceland</td>
<td>-1.43292</td>
<td>4.616241</td>
</tr>
<tr>
<td>Italy</td>
<td>1.244607</td>
<td>7.293767</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.28275</td>
<td>5.76641</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>-1.33143</td>
<td>4.717734</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.998011</td>
<td>7.047172</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.637109</td>
<td>6.686269</td>
</tr>
<tr>
<td>Norway</td>
<td>-0.91785</td>
<td>5.13131</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.035262</td>
<td>7.084423</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>-0.27341</td>
<td>5.775753</td>
</tr>
<tr>
<td>Spain</td>
<td>1.567132</td>
<td>7.616292</td>
</tr>
<tr>
<td>Sweden</td>
<td>-0.76425</td>
<td>5.284906</td>
</tr>
<tr>
<td>Switzerland</td>
<td>-0.96525</td>
<td>5.083908</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.570563</td>
<td>7.619723</td>
</tr>
<tr>
<td>United States</td>
<td>1.535394</td>
<td>7.584555</td>
</tr>
</tbody>
</table>

VI. Concluding Remarks

This paper investigates the impact of different types of technology variables on entrepreneurship performance in twenty three developed OECD using two measures of entrepreneurial activities: the World Bank Group Entrepreneurship Survey 2008 and the OECD Structural and Demographic Business Statistics. Empirical results of the mixed effects model indicate that entrepreneurship performance responds positively and significantly to the intensity of cellular phones, patent applications, and computer and
communications services. The impact of personal computers ownership and broadband subscribers is found to be inconclusive.

The study shed light on the importance of building a solid IT infra structure as a major determinant of entrepreneurial activities. Although the study is based on data from developed economies, the results of this paper can also benefit policy makers in developing countries as it shows the importance of technology variables as main determinants of entrepreneurship performance.

References


Business Support for Start-Ups:

How to Use the Balanced Scorecard as an Inter-Organizational Shared Tool

Florence Gangloff, Karim Meseghem, Gérald Naro, and Sylvie Sammut

The goal of this paper was to produce a shared instrument for evaluating business support in new business start-ups. Today, the public authorities try to supervise this business support and would like the dedicated bodies to gain in both professionalism and efficiency. Business support must now no longer be appreciated on the basis of a bilateral relationship but instead on that of a reticular dimension that connects those who are accompanied with a network of business support, itself in direct connection, perhaps even under the influence of, a group of public funding providers. New tools adapted to this context must be proposed. We chose the balanced scorecard developed in association with all the key players in business start-ups.

Our results show that business support structures wholeheartedly agree with evaluation as a means of improving control of their servuction process. With this in mind, we have built a strategic map which we present here as a key for the future development of the shared evaluation tool.

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Introduction

Business support is booming in France, with more than 3,000 business support organizations and six main networks\(^2\). It is a positive thing that these networks exist, but one question nevertheless remains: do the creators\(^3\) of business consider these structures to be a major part of business support? In addition, and in a more central way, all this raises the questions of the collaboration between all these key players, on the one hand, and the relative performance of these structures, on the other.

Public authorities are currently trying to supervise this activity and would like the dedicated bodies to become more professional and gain in efficiency. From now on, business support should not be assessed only on the basis of a bilateral relation but within a reticular dimension. This brings together one accompanied business with a network of business support, which is itself in direct connection with (even under the influence of) public funding providers. The business support for creators can be defined as "a relational, cognitive process, structuring, legitimizing, co-constructed and existing in a punctual or more developed way between one accompanied structure and one (or some) business counselor(s)" (Sammut, 2009).

The goal of this communication is to produce a shared evaluation tool for business support in the field of a new business start-up. This paper presents the methodological and theoretical advantages. It effectively brings together two disciplines, entrepreneurship and management control, both in the field of management sciences, but which have rarely had the opportunity to interact. The environment of a new business start-up encourages such a link, as it is

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\(^2\) Officially 2,400 structures for 3,000 currently identified. Communication by Thierry Clément, current director of the APCE, les Actes du forum national des pépinières, 2002.

\(^3\) 327,000 creators registered at the end of 2008. (Source: Tellier, 2009)
increasingly sensitive to what is at stake with the evaluation. New tools adapted to this context must be proposed. We chose the balanced scorecard, associating all the key players in business start-ups.

The methodology is inspired by the grounded theory of Glaser and Strauss (1967). This study is exploratory and covers an interactive qualitative approach to contribute to the construction of an inter-organizational shared instrument. Several empirical methods were used: an on-line survey, interviews and a group meeting. The data obtained from interviews were analysed with the software ALCESTE.

In the first part, we will present the context of the study, business support for business start-ups, by emphasizing the reticular dimension. We will then expose, in the second part, the theoretical and methodological foundations of this research. The third part will be dedicated to the presentation of the evaluation tool based on the method of the balanced scorecard.

1. Towards interactive control of business support based on the balanced scorecard

The business support structure is built around a double logic. It has to respond simultaneously to the request made by public funding providers who expect measurable results, and to the request from people with projects who are expecting a servuction process. In this double logic, it is necessary to add another logic, specific to the business support structures, which are keen to have a piloting tool. This would allow them at the same time to monitor and control the key factors in the success of their mission and to undergo non-stop learning, making it easier to analyze and memorize the experience, as well as develop innovative business support practices. In that sense, business support has many processual dimensions
which show the need for piloting of the performance factors and learning processes, as well as an \textit{a posteriori} control dimension from result indicators.

Similarly, an integrative vision of business support, insourcing all the concerns of the various stakeholders (creators, public funding providers, business counselor) around a collective project, seems to require the development of piloting, in order to make easier the dynamic interactions between the various actors present, with the aim of developing collective learning.

From a simple evaluation process, based on \textit{a posteriori} measurement of results, it seems necessary to move towards a system of interactive control, in reference to Simon’s control levers model (1995). The need to take into account the diversified expectations of all the stakeholders present leads us to a well-balanced approach to performance: the model of the Balanced Scorecard (BSC). This model, used with the aim of interactive control, thus seems to us to be a perspective worth investigating.

1.1. Business support of a network: evaluation through interactive control

As previously observed, appraising performances is an essential part of the business support policy in a new business start-up. This supposes that performance indicators are defined and monitored, making it possible to measure the efficiency and effectiveness of the business support network regarding the expectations of the various stakeholders. The peculiarity of business support for a network lies in its inter-organizational nature. From that point on, any method for controlling and piloting the system must integrate a double dimension: \textit{collective} - the network is composed of actors with differentiated objectives and strategies and, at the same time, it answers to a common purpose; \textit{transversal} - the performances are bound in
particular to the quality of the coordination and information exchanges within the business support processes. The interactions within the network thus appear to be a determining variable in the success of the business support to such an extent that they represent a major stake in piloting.

Business support networks have a double stake: appraising performances and controlling of key performance variables on the one hand; piloting the learning and coordination processes within the system on the other. In the control lever model, Simon (1995) operates a distinction between two types of control that are particularly relevant to our problem: diagnosis control systems, which concern control of the critical variables and represent the most classic form of management control. It is based on a posteriori control of results, comparing them to objectives or standards, and adopting corrective measures. Interactive control systems focus on strategic uncertainties and are directed toward organizational learning, the search for opportunities and the emergence of new strategies.

In other words, the diagnosis control systems are focused on implementing deliberated strategies and interactive control systems are directed toward “adaptation to the competitive environment” and especially, toward emergent strategies: "interactive control systems are used to guide the bottom-up processes of strategy emergence" (Simon, 1995, p. 98). This distinction between diagnosis control and interactive control translates the opposition, henceforth classic, between two representation models for management control: cybernetic regulation and the organizational learning model. In very down-to-earth terms, diagnosis control systems appeal to the common devices of management control (plans, budgets, reporting, etc.). On the other hand, interactive control systems are established on the basis of participative management plans, which make interaction easier, as well as sharing information and learning, by processes of the “bottom-up” type.
This refers, for example, to committees, work meetings, progress groups, performance reviews, etc. “through the dialogue, debate and learning which go with the interactive process, a new strategy appears” (Simon, 1995, p. 102).

Business support structures invite us to think about the conception of tools for management control that respond to this double stake in evaluation, within the framework of control of the diagnosis type, and in piloting of the processes, directed toward interactive control. The BSC model, because of its methodology, has the double advantage of measuring performances and piloting strategic processes in a particularly promising experimental context.

1.2. The BSC, a control lever for interactive control for piloting business support processes

The balanced scorecard (BSC), introduced by Kaplan and Norton (Kaplan and Norton, 1998, 2001), is based on the idea of an equilibrium in performance piloting: a balance between the financial and non financial, monetary and physical, qualitative and quantitative indicators, of result (“outcomes”) and process (“drivers”), retrospective (“lagging indicators”) and forward-looking (“leading indicators”), of short and long-terms, tangible and intangible; functional balance (Finance, Marketing, Logistics and Management of Production, Human resources management, etc.); balance in the attention given to the various types of stakeholder (shareholders, customers, employees, etc.).

The model refers to a well-balanced representation of global performances which, around the center of gravity that is formed by the vision and strategy of the leaders, has four axes or perspectives: financier or shareholder; customer; internal processes; learning - innovation. The model consists of describing the vision and strategy of the leaders through a model of
“cause-effect” relations, also called the “strategic map”. This plan of causality in fact translates the representation that those in charge of the firm have concerning the strategy and the best way to achieve it.

As indicated by Kaplan and Norton (2001), the BSC can be used both within the framework of diagnosis control, making it easier in particular to adapt strategies from deliberated strategies, and as a control lever for interactive control, allowing the emergent strategies to develop. For the authors, this last approach appears very promising.

With regard to business support structures, designing and using a BSC would also make it possible to:

- facilitate an interactive formulation process for strategic objectives within the framework of a collective project. The BSC design phase offers the opportunity for reflection by the various actors involved on the strategic orientations and aims of the collective project. Similarly, collective construction of a strategic map and the choice of performance indicators can lead to sharing of the representations around a common performance model;

- measure and follow outcomes indicators, as well as process indicators (drivers), thus making it possible to appraise performances and pilot processes.

- estimate the performance of the structure within its capacity to perform its objectives with regard to the expectations of the various stakeholders.

The model which could result from this could appear as in Figure n°4, where four traditional perspectives of the BSC are replaced by:
− a "public funding providers” axis, translated by performance indicators that make it possible to satisfy their concerns regarding appraisal of the structure’s performances;

− a “project holder” axis, giving place to indicators making it possible to measure the efficiency of the structure with regard to their expectations;

− a “business support process” axis, where the process indicators “performance inductors” are defined, making it possible to estimate the efficiency and effectiveness of the various business support processes, compared to the expectations of the public funding providers and project holders;

− a “learning innovation” axis, which lists the indicators that make it possible to appreciate learning and innovation in the business support structure.

The design of the BSC and its strategic map, just like the performance indicators selected on each axis, may establish the opportunity for teamwork by a project group bringing together representatives of all the stakeholders. The resulting balanced scorecard can also be of use as a basis for performance reporting (in particular with public funding providers), but also in “performance reviews”, during which representatives of the various stakeholders interact around the results of the BSC.

**Figure 1 - A BSC model for business support**
2. A qualitative methodology for elaborating a shared evaluation tool

This research was conducted in France within the context of a research convention. In order to produce an assessment grid for business support in the field of business creation, we adopted an approach inspired by the grounded theory of Glaser and Strauss (1967). This research is of an exploratory nature and uses a qualitative approach to the field in which the researchers interact with organizational actors in order to contribute to the construction of a theory. For Ahrens and Chapman (2006), “qualitative studies [...] are not simply empirical, but result from a profoundly theoretical activity”.

Social reality was seen, from then on, as “emergent, subjectively created, and objectivized through human interaction” (Chua, 1986, p. 615). The observation phenomenon is, by nature, dynamic. It is part of a processual approach by which “it is a question of describing, analyzing and explaining the what, why and wherefores of a sequence of individual or collective actions, based on the hypothesis according to which social reality does not constitute a stable state, but results from a dynamic process” (Pettigrew, 1997, p.338). For the upholders of the process approach (Hinings, 1997; Pettigrew, 1997), qualitative methodologies and case studies seem to be particularly well-adapted.

If, as noted by Kasanen et al. (1993), such approaches are still very rare in research in management control, things seem to be changing, with the development of works today based on the methodology of the research action. In that sense, an interesting perspective is underlined by Kaplan (1998), who pleads in favor of a so-called “research action innovation” approach, consisting in developing new theories and practices through in the field
experiments of innovative practices. The author refers quite particularly to his works with Norton on the BSC. Our study aims to experiment through research action, an innovative perspective, and one that was little investigated by Kaplan and Norton: using the BSC within the context of evaluating and piloting an inter-organizational process.

Table 1 – Individuals interviewed

<table>
<thead>
<tr>
<th>BUSINESS SUPPORT STRUCTURES</th>
<th>FUNCTION</th>
<th>PUBLIC FUNDING PROVIDERS</th>
<th>STRUCTURE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional chamber of professions and crafts</td>
<td>Assistant director and coordinator</td>
<td>Languedoc-Roussillon region</td>
<td>Director of business development</td>
<td></td>
</tr>
<tr>
<td>Boutique de Gestion Pays de Lunel</td>
<td>Director</td>
<td>DRTEFP LR</td>
<td>Assistant director</td>
<td></td>
</tr>
<tr>
<td>Profession Sport 34</td>
<td>Director</td>
<td>Hérault General Council</td>
<td>Representative</td>
<td></td>
</tr>
<tr>
<td>Maison de l'Entreprise du Cœur d'Hérault</td>
<td>Director</td>
<td>Caisse des Dépôts et Consignations</td>
<td>Representative for territorial development</td>
<td></td>
</tr>
<tr>
<td>ORIFF. PL.LR</td>
<td>Regional delegate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Context'art</td>
<td>Director</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The approach proposed here does not rely solely on the generic use of a tool (the BSC), but rather on its adaptation to the case of business support for new business start-ups. If the principles of the BSC correspond – from a theoretical point of view – to the needs of the situation studied, it is important that we confirm its relevance with regard to the key players.

The emphasis on the representations of the key players uses a methodology with a qualitative dominant. Taking into account discourse via interviews opens out on to a certain number of content analysis methods. In this case, a double methodology was envisaged. First, the study
aims to focus on the semantic universe of the various key players interviewed. During this first stage we used the statistical data processing software, ALCESTE.

However, and to approach these initial elements in greater depth, we chose to develop a second type of analysis, not to record the incidence of the terms used, but instead from an interpretation perspective, in order to consider the context. This methodological triangulation made it possible to carry out an in-depth study and to identify needs in terms of prospective tools.

The automated textual data analysis (TDA) method “concerns all linguistic components and essentially covers two types of approach: on the one hand, linguistic analyses which study and compare the formal structures of the language […] and, on the other, content analyses which study and compare the signification of speech in order to update the systems of representations conveyed by this discourse” (Blanchet and Gotman, 2001). This analysis makes it possible to bring obvious content to the foreground, as well as more implicit content in a specific context.

This methodology turned out to be particularly relevant for the study carried out here. The main applications for TDA in the present study were effectively:

- to make it easier to characterize and understand environments, situations, and specific contexts by means of conversations or even press reviews.

- to characterize the language so as to better adapt the vocabulary and style of communication.

- to characterize the speeches of the key players on their perceptions, beliefs, attitudes, motivations or behavior to facilitate the comparison between different categories of population.
- to compare the speeches and language of various categories of personnel to identify the representations.

Developed by Max Reinert in 1986, ALCESTE is software for lexical analysis through context. It concentrates on studying the structure of distributions from a corpus of homogeneous texts (a set of interviews, a collection of articles.). The aim is to quantify a text as a means of highlighting the structures that have the most sense. Various points of view are expressed by the actors on a given subject by means of discourse. The system “consists in cutting the text studied into segments of comparable length, [...] and studying variations in distribution of the full words in these segments” (Reinert, 2008).

Secondly, an analysis of additional content seemed necessary. The statistical data obtained from ALCESTE provided an initial outline of the representations of the key players by indicating the “semantic context”. However, it seemed necessary to go into further detail in this first version by using the whole sentence and speech. The approach used aimed to accentuate the themes and underlying themes evoked in the conversations. This method turned out to be particularly relevant for the creation of a shared tool and particularly within the context of the BSC.

3. Results and discussion

3.1. Results

The results of the corpus studies carried out with ALCESTE\(^4\) show that the semantic universes of the key players, be they public funding providers or business counselors for start-

\(^4\) The results from ALCESTE are presented in Appendix 1 in their original version.
ups, cross the various axes of the BSC. There are thus 4 themes that stand out clearly: an economic and social theme, a theme directed toward project holders, a theme directed toward processes and finally a learning theme.

**Economic and social theme**

The first theme refers to the economic and social dimensions. It is a question of putting into perspective business support structures, companies and the territory. The semantic analysis shows the roles of new business start-ups within the territory from the point of view of economic development but also regarding insertion and employment. We found various sub-themes in the corpus. Problems regarding accommodation and the cost of business support structures are one of recurring aspects in this first axis.

As ALCESTE's analysis shows, price is given considerable weight. A more detailed analysis confirms this: “we have, with regard to the specifications, various phases where we have to explain our results [...] we have indicators on the number of meetings, diagnosis, accommodation, outgoings and sustainable insertions” (business counselor). Also, “we manage to attain consolidation because there are always discussions about the cost of the person receiving assistance. There too, I think that we would all gain from being a little more clear” (public funding providers).

Besides the costs engendered by business support, public funding providers were revealed to be particularly attentive concerning the contributions made by these policies for the territory, in particular through the link between the company’s durability and employment: “the Direction for Territorial Action develops various actions in favor of insertion through the economy for everything concerning intermediate associations, insertion organizations and the creation of activity, as well as service jobs. All of which make it easier to gain access to
employment” (Public funding providers). Those who do the accompanying are conscious of the impact their actions have on employment (“the durability of the firm. Durability, and even the development and job creations which can result from it”) (business support provider).

**Theme of the project holders**

The second theme emphasizes the service rendered by business support. It underlines the statutory constraints (“specifications”, “agreements” (“conventions”), “labeling”, “obligation” (“bond”), “legal”), and quality constraints (in terms of “evaluation”, “requirement”, “professionalism”). The business support structures must be able to respond in a way adapted to the needs of those being accompanied. “With regard to certain kinds of service, […] we have phase reporting with a qualitative aspect, we make reports, but do words always mean the same regardless of what type of business support we are dealing with? Like I just said to you right now, we have social workers, etc., and we can see clearly that, depending on the social workers, we have very different cultures, hence the “depending on”… There has thus been no work done on designing an evaluation method” (business counselor). This adaptability requires strong contact between those being accompanied and the business support providers (in particular in the bereavement phase…).

In addition to these initial constraints, public funding providers raised the need of fame, image. We can in this context quote the comments of a financier, for whom “it is important for the Department that the image of the activity creation theme be strong, and effectively a positive image, even a brand of some kind”. For business support providers, the search for a reputation is ambivalent. While for some, it can be problematic (“now, we are more in the type of fame that will prevail, because in calls for tender, those who generally stand out are
big structures, and even structures with a national impact, and which are in tune with the logic of the market, where the economic criteria governing the prices of services are very low, thus we are more in the “established structure” reputation trend, as a means of making it easier for new and small structures to emerge” (business counselor). For others, it is source of overtaking and improvement (“I would say on the contrary, the more renowned we are, the more renowned we have to be… at the same time, it is not for nothing that we are renowned, plus we must take care that our reputation is not a hindrance to good realization of services, and that we do not rest on our laurels” (business counselor).

Process theme

This specificity should incite the proposal of supervised business support processes (“tool”, “data”, “balance sheet” (“assessment”)) through a ”methodology” that aims to “improve” the service for the beneficiaries. “[Performance indicators] are innovative, they […] push [business support providers] toward innovation because, each time, the criteria evolve and […] grow in the right direction. They open up exactly to services other than those at the heart of a profession; before, [they] were estimated solely on the basis of the actions at the heart of the profession, while now, [they][will] be estimated […] on what [they] may do around that central aspect, and that is encouraging”. The business support process includes several aspects: technological, commercial and administrational, with the help of a business plan that has been drawn up. A business counselor notes, “How many people obtained help with technological feasibility, commercial feasibility, because it seems to me that that could provide the factual elements that would show how things have changed”.

Similarly, access to adequate training is another important aspect in business creation: “later, there is what goes with business creation: possibly training courses, to try to find the nature of jobs, other sustainable means of insertion (let us say it like that), beyond this, afterwards,
administrative files which ask us for the number of men/women.” (Business counselor).

Finally, innovation appears to be a central axis in the reflection process of public funding providers for whom “innovation must be present in all business creation projects. If there is no innovation (not technological innovation, just innovation) in the projects there will be no competitiveness and thus no durability ”). (Financier).

Learning theme

Business support requires a particular framework (“specificity”, “specializing”) with a particular “culture” (“profession”, “craftsman”, “auto-entrepreneur”). Business support providers must thus work within a “projects” logic, and have wide-ranging knowledge in the fields of management, law and communication. Learning (“learn” (“teach”)), and an spirit open to novelty (“new”) confer business support providers with skills and particular experience (“Out of habit, I am quick to understand, to know if the work on the project has been done and is not still to be done, and if we can move on directly to the following stages, market research and documentary research, business plan, etc.”). (Business counselor).

This skill capital is enhanced by the learning process. For public funding providers, “training”, the “project” and the “holder” are part of a set of factors for “success”, or “confidence” (“trust”). The business creation process is not represented as an isolated act but as a “construction”, a balance that is part of the “duration”. This semantic set is particularly rich insomuch as it highlights the difficulty and the success of this undertaking.

Four axes appeared from the content analyses. They correspond to the various axes proposed in the prospective table. The remainder of this communication will focus on formalizing the results of the content analysis in order to obtain a piloting tool shared by the key players.
3.2. The strategic map

In our opinion, it was necessary to adapt the strategic map to the context of new business start-ups. From analyzing the interviews, an initial version of the map was drawn up. To have it validated by the key players in the business support sector, we organized a group meeting in association with:

- a financier, the Languedoc-Roussillon Region, represented by Kathya Rousson,
- a business support structure Context’ Art, represented by Claude Sapej,
- a business support network, a Synersud network, represented by Françoise Pasquier.

A 4-hour discussion allowed us to produce this tool based on the functioning logic of the BSC. A reflection was developed on the strategic vision of the key players in business support. An agreement was outlined around the question of territorial economic development. The strategic map links the performance factors which contribute to the direction of this strategy.

**Group meeting principles**

Step 1 – Presentation of the goals of the study and of the main characteristics of the BSC method.

Step 2 – Proposal of a strategic map based on analysis of the interviews (Appendix 2).

Step 3 – Discussion concerning the strategic vision of the key players in business support.

Step 4 – Construction of a new strategic map based on a blank map.

We explained the advantages of the four axes to our interlocutors and together drew up a set of indicators. The interviews were recorded in full.
<table>
<thead>
<tr>
<th>ECONOMIC AND SOCIAL DEVELOPMENT</th>
<th>To promote economic territorial development</th>
<th>Firms – Individuals</th>
<th>Public finding providers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business support structures</strong></td>
<td>Efficiency - Efficacy - Effectiveness (stakeholder satisfaction)</td>
<td>Development of competencies</td>
<td>Spatial justice</td>
</tr>
<tr>
<td>Number of project holders (created, reorientation, return to employment)</td>
<td>Culture of council</td>
<td>Number jobs created</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salary (% of the Minimum income SMIC)</td>
<td>Durability rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evolution in projected business income / effective business income</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOLDERS OF ACCOMPANIED PROJECTS</th>
<th>Attributes product / service</th>
<th>Relations</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attributes product / service</strong></td>
<td>Contents of the formalized service (flyers, on-line tools)</td>
<td>Durability of the link after business support</td>
<td>Communication tools used</td>
</tr>
<tr>
<td>Readability of public funding providers in the realized services</td>
<td>Evaluation of satisfaction with the service</td>
<td>Visibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Insertion of those accompanied in the networks</td>
<td>Reputation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUSINESS SUPPORT PROCESS</th>
<th>Process of Management of the op.</th>
<th>Process of management of those accompanied</th>
<th>Innovation process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process of Management of the op.</strong></td>
<td>Respect of project specifications and the legislation</td>
<td>Confidentiality</td>
<td>Propositions importance / environment</td>
</tr>
<tr>
<td>Tools of business support and traceability</td>
<td>Membership and validation of the stages of the course</td>
<td></td>
<td>Launch of experiments (retrospective and prospective balances)</td>
</tr>
<tr>
<td>Modalities of implementation of the business support (budget forecast axis)</td>
<td>Put in active course (participation of 2 key players)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification of the network’s key players and of</td>
<td>Shared Balance (possibly reorientation after</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
In order to understand the relevance of the tool as well as the dynamics of construction, we present each of the axes via a bottom-up reading.

_The learning axis:_

This axis expresses the logic of producing a global vision: making territorial economic development easier in terms of efficiency, efficacy and effectiveness. To do so, it is important to use an essential performance lever in business support: the capacity for learning and the capacity for facilitating change within business support structures.

The three main points on which the various protagonists in our meeting asserted a pregnant interest were: human resources, informative and relational capital, and the organizational capital. After confrontation on the basis of each of the points, an exhaustive list of factors was established collectively. These are presented in Figure 5.
The business support process axis:

This axis refers to the processes of internal activity. It answers the question: “if we are to satisfy both the beneficiaries of business support (the creators of companies) and public funding providers, in which processes must we excel?” The participants at the meeting considered that three main fields were concerned: the operations management process, the management process for those accompanied, and the innovation process. Once these main ideas had been underlined, the question was to determine collectively on which indicators it was necessary to focus. Figure 2 (line process for business support) made it possible to do a complete scan of the actions that business support structures must perform in order to produce satisfying business support according to the idea established simultaneously by the key players specializing in business support and by public funding providers who contribute funds.

The axis for the accompanied project holder:

This axis corresponds to the customer axis in the balanced scorecard method. The holder is at the heart of the business support process. The performances associated with this axis can be appreciated in three ways:

- product/service attributes: business support is a servuction process that depends on both the business counselor and those accompanied. The project holder is a key player in this co-construction process which can result in a new business start-up or in bereavement for the project. Does he have enough information at his disposal to appreciate the nature and characteristics of the service? What tools support this performance?

- Relations: business support structures must contribute to the insertion of the project holder in his field of business. It must share with him privileged links which it weaves with
financing, consultancy, training structures … This link can be analyzed in a dynamic way. To what extent is the business support structure able to maintain this link with the project holder beyond the process of business creation?

- And finally image: the fame of the business support structure can be a control lever for the success of the new firm. It effectively plays a part in strengthening the legitimacy of the firm. What means are used to strengthen the firm’s visibility?

The economic and social development axis:

The last element in the strategic map corresponds to the fulfillment of the previous stages. For a firm, it can be described in terms of profitability and cost control. The analysis highlighted expectations in terms of efficiency, efficacy and effectiveness. The economic and social performance of the business support structure was described with regard to the expectations of the various stakeholders:

- The project holders: performance is appreciated in relation to both the company and the individual. What level of activity does the new firm have? What is the income of the project holder?

- Public funding providers: their requirements are in terms of territorial economic development. How many jobs have been generated by the new firms? How long-lasting are they?

- The business support structures: their performance can be evaluated with regard to business volume, but also with regard to the role played by the structures in terms of insertion. How many project holders have been accompanied? What is the return in terms of employment?
This group meeting was prolonged by the construction of a closed questionnaire intended to operationalize the performance measurement indicators and to test the relevance of the strategic map. It was submitted to the participants. A meeting was then organized on July 21, 2009 with the CRCI LR and the PFCA34 to validate the questionnaire. This questionnaire summarizes four dimensions in the strategic map and aims to validate the indicators used to estimate the performance of business support.

Conclusion

This contribution showed the importance of the link between management control and entrepreneurship, two management sciences disciplines, through use of the balanced scorecard; in that sense, it provided a theoretical contribution. Business support structures in new business start-ups are evaluated and the pressures facing public funding providers are increasingly heavy, while business creators require the implementation of tools adapted to the specificities of business support. We used the BSC by adapting it to the case of business support for new business start-ups and by validating, beforehand, its relevance with the various protagonists. Our results show that business support structures abound in the direction of evaluation as a means of improving the control of their servuction process. Drawing up the strategic map is the first stage in the finalization of this tool. It should be completed in the coming weeks.
Bibliography


### APPENDIX 1- ALCESTE results

<table>
<thead>
<tr>
<th>Economic and social theme</th>
<th>Public funding providers</th>
<th>Business support providers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conseil (54), aujourd'hui (53), développer (32), économie (36), stratégie (22), rôle (20), gestion (18), région (18), consulter (15), France (16), emploi (14), régional (13), soutenir (13), partenariat (13).</td>
<td>Secteur (87), association (37), venir (26), Montpellier (25), Languedoc (18), prix (16), inscrire (10)</td>
</tr>
<tr>
<td>Project holders theme</td>
<td>Cahier des charges, convention (32), résultat (28), élément (26), évaluation (24), indication (23), national (22), document (21), charger (19), prévoir (19), obligation (17), labellisation (16), réponse (15), suivre (23), exigent (11), regarder (10), interroger (10), cadre (9), phase (9), enquête (9), monde (8).</td>
<td>Evaluation (45), évaluer (21), qualité (16), démarche (15), mettre en place (14), résultat (14), demander (13), méthode (12), disposition (11), indication (11), réseau (11) référentiel (10), processus (10), dossier (10)</td>
</tr>
<tr>
<td>Process theme</td>
<td>Allocataire (53), département (32), référentiel (30), outil (23), données (22), bilan (19), ensemble (16), méthodologie (14), améliorer (14), référent (13), regard (12), savoir (12)</td>
<td>Regarder (10), niveau (9), formation (9)</td>
</tr>
<tr>
<td>Learning theme</td>
<td>Projet (134), porteur (104), accompagner (45), formation (33), durée (21), métier (18), réorienter (16), adéquation (16), évaluer (12), évoluer (12), confiant (12), réussite (12), construction (12), difficile (10)</td>
<td>Statut (65), projet (54), action (33), professionnel (33), métier (31), artisan (25), cœur (21), culture (19), autoentrepreneur (19), spécificité (15), spécialiser (10), nouveau (10), juridique (8), apprendre (7)</td>
</tr>
</tbody>
</table>
This paper describes as a case study our initial experience in teaching a new class, Social Entrepreneurship: Arts Management.

We designed the class to encourage a partnership between our academic offerings and the communities in which local arts organizations are situated. We took advantage of the strong presence of large and small arts institutions in Cincinnati. Many are part of plans to re-develop Cincinnati’s urban core, such as Know and Ensemble Theatres; National Underground Railroad Freedom Center; and Cincinnati’s Symphony Orchestra, Museum Center, and Art Museum.

Cincinnati also has unique programs, including the Fine Arts Fund, a fundraising organization for the local arts designed to imitate the United Way model of collecting and distributing funds to a variety of institutions; Enjoy the Arts, which works with arts organizations to provide incentives to encourage young people to attend arts events inexpensively; and Learning Through Art, an organization that uses art to help disadvantaged children achieve educational/cultural objectives.

To encourage interdisciplinary participation, prior coursework in business classes was not required. The course attracted 24 students including entrepreneurship, communication, art, music, and theatre majors and minors. While all of the arts students had attended multiple arts venues, the great majority of business students had not attended any. As a result, they strongly benefited from the experiential component of the class, especially finding out that some arts venues offer not entertainment reserved for elites, but also for those who enjoy popular culture. A number of students enjoyed attending Reefer Madness, for example, where there was significant interaction between the players and the audience (See Meisieck, 2002).

Class goals

This class focused on analyzing nonprofit planning, budgeting, marketing, community engagement and fund raising. Given that non-profit boards frequently indicate that non-profits would operate more effectively if their leaders possessed business skills, it fills an important need. Its goal is for students to see the potential of learning, serving, and leading in the arts.
Description of student learning objectives and how they are enhanced through use of community engagement principles

In addition to textbook and lecture materials, student learning was enhanced by three assignments: serving on unpaid intern teams with arts organizations; hearing from guest speakers from the local arts community; interviewing, writing, and presenting biographies of arts practitioners to see the different careers paths they have followed.

These hands-on assignments helped this course achieve three sets of outcomes, including understanding of:

- how creativity, intellect, training, and experience can be channeled into an arts-related career
- non-profit business structures and how different types of nonprofit institutions require different responses to management issues
- what is expected of artists or arts managers in the marketplace; how economic and political events affect artists and arts culture; and challenges facing the arts, including community engagement, audience development, and financial support.

Description of learning activities as they relate to community engagement

Students heard ten 1-hour presentations from arts executives from such groups as Enjoy the Arts, Fine Arts Fund, Acclaim Awards, Taft Museum, Cincinnati Symphony Orchestra, Cincinnati Playhouse, Know Theatre, Learning through Art and Cincinnati Opera, as well as presentations from arts patrons and board members. Surprisingly, virtually every guest speaker, who was asked to read a textbook chapter, indicated their experience was at variance with the guidelines promoted in the text.

Surprising insights into arts management

This course proved to be a revealing experience, as students learned about the particular issues facing a variety of arts genres, issues often very different than those facing for-profit organizations. Of special significance was the almost universal reaction of guest speakers that textbook solutions are “cookie cutter” and not applicable to specific arts genres.

Economic Structures

Perhaps most importantly, arts organizations vary dramatically in their economic structures.

- **Performing arts organizations** indicated they needed to generate significant revenues from ticket sales to attract the private donations they needed to generate to find the ideal balance of ticket prices and sales to maximize box office revenues. Donors expected them to provide budgets that were neither
significantly in the black (are we donating too much?) or in the red (is my donation going to be a sunk cost in a failed endeavor?)

• **Signature shows**  In addition, one major theatre executive related that the entire season’s only profitable production was Dickens’ *Christmas Story*, so popular that it has an extensive run each year, at low cost, as costumes and sets can be re-used and rehearsals times are shorter as well. The story from the ballet was similar, with *The Nutcracker*, offered annually, generating profits that subsidized many other less popular productions.

• **Museums**  On the other hand, curators indicated museums can almost never charge admission prices to cover even a fraction of their expenses, as the cost would be too high to attract enough visitors to justify the museum’s presence.

**Marketing**

• **High culture organizations**, such as the opera and ballet, indicated their most important marketing goal was to attract an audience wider than the 3% of the typically high income population that had ever attended one or other venue; while some smaller organizations needed to attract more affluent customers who would be willing to purchase season subscriptions, a key to planning and budgeting for yearly events.

• **Aging audiences**  Many organizations were also concerned that their audiences were aging and were searching for ways to increase their appeal to a new generation of culture seekers, without losing their older audiences, especially those who purchase subscriptions, an decision relatively fewer patrons are making and a factor in making long term decisions more difficult for arts managers. For example, a museum revealed it went through a yearlong process to update its public materials, including changing the font it used from one that was very formal to one that was in their view communicated greater accessibility to the museum.

• **Internet presence.**  Students were also surprised at the significant investments virtually all the arts organizations made in an Internet presence. As Bernstein (2007) points out, the internet offers arts organizations the “power of instantaneous, comprehensive, and low-cost marketing tools,” a 21st century way of informing visitors of events and of selling tickets and gift shop items.

**Management**

• **Leadership:**  Another insight confirms Jim Collins’ (2005) that most nonprofits need to operate in terms of legislative leadership rather than executive leadership, in which “no individual leader—not even the nominal chief executive—has enough power to make the most important by decisions by himself or herself (p 11), especially as large donors often exercised significant influence at board meetings and volunteers often work for nothing but recognition and may not have the ideal talents for the roles they are assigned.
• **Human Resources:** On the other hand, we found many leaders who said motivating employees was easier in the nonprofit segment because of the dedication of the donors and the volunteers to the success of the enterprise—that is, a greater sense of commitment than some leaders experienced in the free enterprise sector.

• **Strategy:** Perhaps most importantly, arts leaders struggled with clearly identifying their community uniqueness so they could best connect with current and future donors and audiences, primarily through building their brand reputations. Qualitative judgments such as the reactions of audiences, the coordination of creative processes, and relationships with donors, volunteers, and employees played a significant role in strategic planning.

• **Career Progression:** The managers interviewed also revealed that unlike business management, arts managers do not have clear job descriptions and the biographies revealed many juggled multiple roles and found few counterparts in the community with whom they compared experiences.

**Lessons Learned**

**Textbooks for arts management need to highlight the distinctions among arts organizations as different arts genres require different management strategies: one size does not fit all.** Large arts organizations typically have access to larger amount of donor money and can provide permanent long term jobs to its management team. Small organizations typically depend more on relatively poorly paid workers and volunteers to support their efforts. Each requires a different type of management and human resources strategy to succeed.

**Additionally, different arts genres allot their time differently:** Museum directors spend a significant amount of time fund raising with large dollar patrons whereas performing arts groups spend more time attracting an audience to fill their auditoriums, an indication of success to patrons.

**Internship teams are excellent learning tools.** Most students worked directly with small, typically shoestring non-profit arts organizations, often with people of their own age, and gained hands-on experience in calling donors, directly selling tickets, cleaning venues, and executing short term strategies to drives audiences to arts events. This part of the class received the highest evaluations. In particular, students noticed a key difference between the institutional organizations, with their more formal organization structures with those which operated on a shoestring budget. They noted that the smaller organization devoted more time to creative effort and less to reports, forms, and what they saw as other impediments to the creative process (Hagoort, 2003).

**Interviews with and class presentations on artists and arts managers allowed students to understand the paths people took in the arts, often surprising ones.** They also learned collectively to understand a wider range of arts organizations, as
each student interviewed someone from a group other than where their internships were established. They also learned that many artists found opportunities as arts managers and some arts managers had little or no arts experience before finding work in that field.

**Conclusion**

In short, we designed a class with a community-engaged perspective in which students learned from the experience and knowledge of community experts and participated in community arts activities under the direction of arts partners.

The class met the four standards for effective community-engaged classes: it addressed important community needs; the service activity was tied to academic goals; students wrote papers reflecting on their experience; and students received and gave recognition to their community partners. (Abravenal, 2003).

Significantly, business students achieved an appreciation for the arts and the importance of good management practices in the arts. Arts students likewise saw they could maintain an interest in the arts by serving a role in an arts organization without being an artist and also of the issues facing arts organizations, especially the smaller ones which operate on year to year budgets and depend upon the generosity of donors to survive.

The community partners enthusiastically embraced their roles as expert resources for students and expressed appreciation for being allowed to direct the efforts of the student internship teams to put their talents to uses which were decided by each sponsoring organization.

As teachers, our most important learning was how the best laid plans do not survive “contact with the enemy.” We scheduled presentations from guest experts well in advance of the semester’s start. This put us in a vise. Each week after we lectured from a chapter in the textbook (Byrnes, 2008), we heard our guest experts indicate disparities between text book nostrums and what worked and did not work in their experience, something reflected in virtually every student evaluation.

In our next iteration of the course, we plan to organize the course down by genre such as museums and performing arts organizations, each subdivided into large and established organizations and small and shallowly rooted organizations. Our lectures will more closely follow the arts managers’ insight than those of a textbook.

We also plan to continue to follow community engagement principles as students most praised their contact with arts organizations, managers, and artists.
References


Nigeria: Entrepreneurship, Trade, Poverty, Gender and Sustainable Development

Olufemi Boyede

Abstract

Without gender equality and equity, national development will be stunted and lopsided. In Nigeria, poverty wears a woman’s face and the gender imbalance can only be addressed by Government policies and programmes, as the country remains a government-led economy.

The average Nigerian woman accounts for an estimated 60% of family’s income, especially on the lower strata of the societal ladder. There is therefore no doubt that any attention paid to improving the lot of the Nigerian woman through trade and entrepreneurship orientation will have a direct effect on the country’s quest to alleviate poverty and entrench sustainable development.

This paper assesses the interaction between entrepreneurship, trade, poverty, gender and sustainable development and concludes with a set of policy and strategy recommendations to help international aids providers on entrepreneurship development and poverty eradication in Africa as well as government at all levels in effective policy formulation.

Key words: Entrepreneurship, Trade, Poverty, Gender, Sustainable development

1.0 INTRODUCTION

Entrepreneurship, trade, poverty, gender, and sustainable development are broad-based contextual issues that elicit great concerns within and among nations. They play veritable roles in the socio-economic rating of a nation within the comity of nations because of their overwhelming impact on the overall wellbeing of the citizens of a state as well as on the national economy. However, there is a dearth of studies that focus on the interaction of these issues globally and in Nigeria more specifically. This paper thus seeks to establish the link between entrepreneurship development, perpetuation of poverty in Nigeria and poor gender consideration in national policy formulation with emphasis on Nigeria’s trade policy. It seeks to further assess the position of women entrepreneurs in Nigeria, government support programmes for women entrepreneurship development in Nigeria, trade promotion services to help Nigerian women
participate in international trade and the role of Nigerian women entrepreneurs in the country’s development and competitiveness. The paper concludes with a set of policy and strategy recommendations to help international aids providers on entrepreneurship development and poverty eradication in Africa as well as government at all levels in effective policy formulation.

This paper is written based on consistent findings and observations by the author over a few years of convening the KVL Export Roundtable in four geo-political zones in Nigeria. The KVL export Roundtable is a Public-Private Dialogue that creates a forum, periodically, for non-oil exports stakeholders’ interaction, sustainable export policy formulation and investment promotion. Findings from the dialogues have shown consistently, that non-gender consideration in trade policy formulation was a great impediment to export development and consequently, sustainable development. The findings also reinforced similar findings from the author’s consultancy stints with the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) as an entrepreneurship consultant. Hence, the author’s interest in evaluating the direct impact of these critical issues interacting together on the Nigerian economy and development potentials.

1.1 CURRENT TREND ON GENDER AND DEVELOPMENT

Gender consideration on national issues at all levels has become a constant agitation in the world today because of the established linkages between poor gender consideration in policy formulation and retarded development and economic growth of a country (Chen, Vanek, and Carr (2004). In the international aid circles, the promotion of gender equality and women’s empowerment is commonly referred to as a ‘cross-cutting’ issue, meaning that it has to be taken into account if results are to be achieved from investments in specific sectors such as health, agriculture or enterprise development. It is also a developmental goal in its own right – MDG 3.
But because policy priorities of governments and NGOs often reflect structural inequities in power relations within the wider society, the most difficult goals to reach and that need the most investment – i.e. gendering policies -, paradoxically, tend to be those that get the least attention (Urmilla Bob et al, 2008).

The World Bank Policy Research Report (2000) defines gender equality as that stage of human social development where there is:

...equality under the law, equality of opportunities (including equality of rewards for work and equality in access to human capital and other productive resources that enable opportunity), an equality of voice (the ability to influence and contribute to the development process) for both women and men.

This, the World Bank Report (2000) indicates, is a stage when both women and men realize their full potential. Several researchers and organizations agree that gender equality is far from being realized today (Casale, 2004; eThekwini Municipality, 2006; Fischer and Wood, 2003). Gender inequality manifests itself in society in various ways and has a range of negative consequences, especially for women (Walby, 2004; World Bank, 2006; World Bank, 2002). Gender-based practices and attitudes in the socio-economic sphere also place heavier burdens on women entrepreneurs when compared to their male counterpart (Botha, 2006; Clones, 2003; DTI, 2005, Lopez-Claros and Zahidi, 2005). There is therefore a desperate need to empower women, ensuring their involvement in mainstream activities through measures that will increase their social, economic, and political equity, and broader access to fundamental human rights (Lopez-Claros and Zahidi, 2005; World Bank, 2006).

“Gender equality is an issue of development effectiveness, not just a matter of political correctness or kindness to women” (World Bank, 2003). Thus, when discriminatory burdens are
removed, the capacity and earning power of women increases (World Bank, 2003) and consequently, the economy is positively impacted. Furthermore, women tend to reinvest these gains in the welfare of their children and families, multiplying their contribution to national development (Bossen, 2005; Botha, 2006; DTI, 2005; Lopez-Claros and Zahidi, 2005; World Bank, 2003). According to the World Bank (2002), although economic development tends to promote and improve gender equality, its impact is neither sufficient, nor is it automatic. Measures are still required at all levels (globally, nationally and locally) to ensure that women benefit fully from such development.

In Nigeria, despite the growing concern globally for gender-mainstreaming in national issues, gender discriminatory practices that are steeped in patriarchy are still widespread and deprive the economy of optimal usage of its human resources. Several gender sensitive legislations have been put in place nationally but, their implementation has been deterred by the patriarchal disposition of most cultures and tribes in the country. This prevents the economy from realizing its full potential (Clones, 2003; World Bank, 2000; World Bank, 2002; World Bank, 2003; United Nations, 2005).

Historically, women in Nigeria have played a significant role in society and the home. Women contribute significantly to the household income through their work in various areas like farming and commerce. Nigerian society upholds the traditions of marriage and family. Women are under enormous pressure to marry and bear children in order to have a place in society. Once married, a woman's status is under her husband's family and she has very few rights. Also, wives have little male support since Nigerian law does not enforce the husband's responsibility toward family. Many women labor in the fields as farmers, yet the males in Nigerian society commonly deny profits and appreciation for this labor. Inheritance is a repressive issue for many women in
Nigeria. Legally, a woman is entitled to a share of her husband's estate if he dies. However, women rarely receive anything because of a very strong extended family factor; women in most instances cannot even inherit from their fathers in Nigeria.

Customs and traditions have continued to oppress and marginalize women in Nigeria while lack of education has relegated women to unskilled and labour-intensive work. In the rural areas women constitute the workforce in agriculture and are solely responsible for the cultivation of vegetables, cassava and perennial fruits. In addition they also engage in trading on market days and weaving, dyeing and pottery making. In Nigeria there is a gender imbalance which is yet to be addressed by Government policies and policy implementation.

Without gender equality and equity, national development will be stunted and lopsided. A World Bank report reveals that countries with smaller gender gaps have less poverty and faster growth. Countries that promote women's rights and increase their access to resources have faster economic growth and less corruption than countries that do not. Thus, gender practices that undermine, overlook and/ or restrict women’s participation and empowerment in social, economic and political spheres, have resultant implications that impact negatively on the economic growth of countries as well as on the quality of life of women (DTI, 2005; Greene et al, 2003). In view of this fact, stakeholders in Nigeria have canvassed for mainstreaming of gender in policy issues such as international trade, economic partnerships, aids, national planning and budgeting. This was the outcome of a National Consultative Workshop on Gender, Trade and Poverty organized by Trade Network Initiative (TNI), an umbrella body of eleven Non Governmental Organisations (NGOs) dedicated to poverty reduction and overall development of Nigeria.
1.2 GENDER AND ENTREPRENEURSHIP

Entrepreneurship is the act of being an entrepreneur, a French word meaning "one who undertakes innovations, finance and business acumen in an effort to transform innovations into economic goods" (wikipedia encyclopaedia). Suleiman (2006) defined entrepreneurship as “the willingness and ability of an individual to seek for investment opportunities to establish and run an enterprise successfully”. Entrepreneurs therefore, are job creators and/or become self-employed rather than seekers of jobs in an overstretched public service (Adewumi, Mokuolu, and Longe 2009).

An appreciation of gender issues is important when considering strategies to enhance entrepreneurship and private-sector development the world over. There are three main reasons behind gender consideration in entrepreneurship development especially in Africa. First, women are major players in the private sector, particularly in agriculture and in informal businesses. It is estimated that women-owned businesses account for over one-third of all firms, and they are the majority of businesses in the informal sector in African countries (Bardasi et al, undated). Second, the ability of women to formalize and grow their businesses, to create jobs, and to enhance productivity is hampered where legal and institutional barriers exist that affect men’s and women’s enterprises differently. Third, there is evidence—especially at the micro level—to indicate that gender disparities not only disadvantage women but also reduce the growth potential of the region as a whole. The existence of gender related barriers can thwart the economic potential of women as entrepreneurs and workers, and such barriers have an adverse impact on enterprise development, productivity, and competitiveness in Africa. Thus, gender inequality plays a significant role in accounting for Africa’s poor growth and poverty reduction performance.
The basic requirements of an entrepreneur have been identified to include: hard work, teamwork, commitment, appreciation, listening, high expectations, setting achievable goals. Women, by nature and exposure to family relationships, possess most of these qualities that are essential and can be enhanced for entrepreneurial success.

Consequently, addressing gender-specific barriers to entrepreneurship and leveraging the full participation of both men and women in the development of Nigeria’s private sector together represent a significant opportunity to unleash Nigeria’s productive potential and to strengthen economic growth.

1.3 GENDER AND POVERTY

Poverty has traditionally been defined as insufficient access to enough commodities to meet basic needs and as such has been understood to be a state of being. This definition however, looks at poverty from a consumption point of view but, on a broader note, it is necessary to include more recent arguments that poverty is a dynamic, multidimensional process involving a lack of power, assets, human dignity, access to public resources and time and, above all, a lack of opportunity to choose freely how to invest in one’s future. It is also a “feminized” phenomenon that affects women more than it does men. As a consequence of structural inequalities across and within nations, this process is socially reproduced over time and from one generation to the next.

Poverty has been identified as a major obstacle to the realization of women’s human rights and one of the most surreptitious forms of violation of a woman’s rights. Not surprisingly, it came on top of the list of twelve critical areas of concern for the women of the world, adopted at the fourth world conference on women held in Beijing, China. It was estimated in the Beijing Declaration that more than one billion people in the world today, the great majority (about 70
percent) of who are women, live in unacceptable conditions of poverty, mostly in developing countries (Amaka, 2007).

With the severe economic shocks that rocked the Nigerian economy during the early 1980s came real and perceived increases in the level of poverty in the country. Among the factors contributing to the shocks were declining prices of oil, the country's main export, and rises in real international interest rates that compounded the external debt. The major underlying reason, however, was domestic policy mistakes. Economic reforms were introduced by the government of Nigeria in mid-1986 in a structural adjustment programme that included exchange rate devaluation, trade and financial reforms, and budgetary and monetary contraction. These reforms were expected to revitalize the economy's growth. In turn, growth was expected to contribute noticeably to improved equity in the country (Aigbokhan, 2000) but, studies have shown that these reforms had little or no impact in the poverty situation in the country.

The Human Development Report 2002 placed the number of people living on less than one dollar in sub-Saharan Africa at 300 million in 1999 a global share percent of 46.7 percent. According to the report” The declining share of people in extreme poverty is hopeful, but the level remains disturbingly high. And failure to reduce poverty in Sub Saharan Africa, the world’s poorest region, is a grave concern”. In fact, Sub Saharan Africa ended the millennium, 5 percent poorer than in 1990.

In terms of income poverty, Nigeria ranked 58 out of 88 developing countries. About, 70.2 per cent of the Nigerian population according to that report lives on an income of $1(one US dollar) a day, that is below the poverty line. The Human Development Index Ranking places Nigeria in 148th position out of 173 countries of the world in its year 2000 report.
1.4 GENDER AND TRADE

Neither trade as an economic activity nor attempts to manage trade in the form of policy are new concepts. However, attempts to manage trade at the international level in terms of policy and liberalization are relatively recent interventions. Trade is an activity of exchange that appears in different forms, and takes place in different locations. It is considered by most countries of the world including Nigeria as the major driver of sustainable economic development. It has the potential to create jobs, expand market, raise income, facilitate competition and disseminate knowledge (WTO 2005). However, trade has not really thrived effectively as a national development tool because trade policy in Nigeria is not gender sensitive and has not been given its statutory role in the national development policy. Until recently, women in entrepreneurship have been a neglected resource of development and growth. There is a positive and statistically significant relation between exports and women’s share of employment while there is a statistically significant and negative correlation between women’s share in employment and imports. This indicates that export-competing industries tend to employ women while import-competing industries tend to employ men (Duke, 2009).

Numerous reports conclude that trade liberalization is likely to create jobs for women and increase their relative wages. This can be summarized in the following conclusion

“... experience in open, low-income countries until now has clearly been that industrialization has been female-dependent as well as export-led, and many women in outward-oriented developing countries owe their livelihood to international trade expansion”

Joekes (1999).
1.5 GENDER AND SUSTAINABLE DEVELOPMENT

The integration of a gender perspective into a country's plan of action envisions a development that is sustainable. A Gender and Development Plan that focuses on empowerment of women to achieve equity and equality, active participation in the economic, social, cultural and political decision-making, social justice, inter- and intra-generational equity, ecological soundness and equal access to economic resources caters to the vision of sustainable development. There are several critical areas of concern that must be addressed in order to advance the welfare of women. The mainstreaming of gender in sustainable development entails promotion of women's rights and welfare, economic access, sustainable human development, ecological cognizance and greater participation in economic and political issues and decisions.

In Beijing during the Fourth World Conference on Women, participating Governments, recognizing that women's contributions and concerns were too often ignored in economic structures, committed themselves to promoting women's rights by ensuring a gender perspective in all their policies and programmes so that before decisions are taken, an analysis is first made of their effects on men and women, respectively (UNCTAD, 2007).

Now the question arises: what is the value added with respect to women's involvement in development? And while there may be a difference in the impact of development on women and men, the fact remains that:

- Women are not only affected by economic forces as are men, but also in a different fashion;
- Women have much to contribute;
- Women can play a crucial role in an economy's development and with recovery from an economic crisis;
- Women have as much stake in development as men.
Sustainable development therefore, can only be achieved through long-term investments in economics, human and environmental capital. At present, the female half of the world's human capital is undervalued and underutilized the world over. Better use of the world's female population could increase economic growth, reduce poverty, enhance societal well-being and help ensure sustainable development in all countries as is been seen in some Asian countries where this fact has been recognized.

**1.6 RELATIONSHIP BETWEEN ENTREPRENEURSHIP, TRADE, POVERTY, GENDER, AND SUSTAINABLE DEVELOPMENT**

It is crucial to factor women and gender into an understanding, analysis, monitoring and policy formulation of trade and sustainable development, as argued above. There are equity-equality arguments and efficiency arguments for understanding these links. Both gender equality and the right to development are universal rights for women and men, girls and boys and should reflect in all national, regional and international policy formulations in all facets of development. Gender is also an efficiency issue. Trade liberalization has gendered impacts on developing and industrialized countries, and affects the supply-side response of these economies. Research has shown that improved gender equality is more economically efficient, as the following examples illustrate:

(a) Reducing gender inequality could significantly increase agricultural productivity in Africa, for example by giving women farmers in Kenya the same agricultural inputs and education as men farmers.

(b) Failing to invest in gender-balanced primary and secondary education lowers GNP.
(c) Eliminating gender discrimination in occupation and pay levels would increase both women’s income and national income.

(d) Maintaining gender inequality hampers a positive supply response to structural adjustment measures by reducing women’s incentives to produce tradable goods and increasing women’s time burdens.

At the WTO’s Symposia on Trade and Environment and on Trade and Development in Geneva, March 1999, the international NGO network on trade and development, International Coalition for Development Action (ICDA), welcomed what appears to be a growing realization from some member states that trade is not an end in itself, that it is not an automatic panacea for solving the problem of economic growth and development and the challenge of sustainable development, and that it is therefore necessary to mainstream a number of cross-cutting concerns and policy objectives into trade policy and agreements in order to achieve sustainable development for and by developing and industrialized member countries (ICDA, 1999). In this manner trade could be turned "from an end in itself to a means to achieving sustainable human and social development which provides net benefits for poor people, women and men, and the environment." (WTO, 1999).

In view of these arguments and expositions, it can be concluded that entrepreneurship and trade are veritable and dynamic tools for effective poverty reduction and possibly eradication and consequently, major drivers for sustainable human and economic development. However, their effectiveness in achieving the desired output is dependent on the extent of their responsiveness to gender differences and disparities which must be taken into cognizance when formulating trade and entrepreneurship policies at national, regional and international levels and in all aids provisions and assistances.
Entrepreneurial forces are relatively strong in this country, as the lack of jobs and a rise in poverty leave few other options for the Nigerian people. Nigeria has always had a large and active local business population and recent Nigerianization policies have aimed to increase substantially, the role played by local entrepreneurs (Nafziger, 1977). To this end agencies such as the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), the National Directorate of Employment (NDE) and the National Poverty Eradication Programme (NAPEP) were empowered to provide entrepreneurship programmes and funding for entrepreneurs.

Entrepreneurship represents an opportunity for women all over the world, as entrepreneurship responds flexibly to entry, change and innovation (Kitching and Woldie, 2004). This potential has not yet been realized in an optimal fashion in most developing countries like Nigeria. Female entrepreneurs enjoy limited political and economic opportunities. A large number of women work in the informal sector but their contributions are not included in national accounts (UNIDO, 1995). A variety of constraints impair the ability of women to upgrade their production continuously (Kitching and Woldie, 2004). These constraints include poor access to market information, technology and finance, poor linkages with support services and an unfavorable policy and regulatory environment. The need to compete in an aggressive business environment with rapid technological changes and the globalization of production, trade and financial flows further compound these constraints (UNIDO, 2001). Despite these shortcomings and constraints, women have been able to create their own enterprises in Nigeria, where economic decisions would normally be taken by the male head of households (World Bank, 1995).
The needs and contributions of female entrepreneurs in the Nigerian economy seem to be very invisible and overlooked. Female entrepreneurs’ participation in the formal sector of the Nigerian economy is grossly undermined. In Nigeria, women generally have less access to formal education; consequently, they have low participation in the formal sector and thus, take up self employment.

Kitching and Woldie, (2004) in their interview of Nigerian women entrepreneurs in Abuja and Lagos found out that “for a female business owner in Nigeria, the process of starting and operating a new enterprise can be difficult because they lack the skills, education and support system that can expedite their business pursuit. They isolated the following problems, inadequate education, little or no training, lack of capital, too much competition, low opportunity for expansion, poor access to technology, unfavorable government policies, family commitments, old boys network and prejudice from men, as peculiar to the women entrepreneurs.

In the area of microfinance and women's access to credit, most microfinance institutions systematically provide decreasing percentage of loans to women. In most cases it has been found that women have a smaller loan size ostensibly because women are considered to have a lower capital absorptive capacity than men. Consequently, the women's loan packages, programmes, and services are smaller thereby limiting the range of their economic activities and returns.

There is hope however for women entrepreneurs in the formal sector especially with more women going to schools and acquiring competent skills. Nigerian women entrepreneurs are now active in export trade and own service firms supplying services to both local and foreign-owned firms (Riddle and Boyede, 2003). In addition, with support from ITC a National Network for Women Exporters of Services was established in 2006. A crop of high-profile Nigerian women
professionals also set up the highly rated Women-in-Business. Recently, a new association of Nigerian Women in Banking and Financial Services (WIBAFIN) was also launched in Abuja. The momentum is rising and many more women (self-help) associations are springing up.

### 3.0 GOVERNMENT SUPPORT PROGRAMMES FOR WOMEN ENTREPRENEURSHIP DEVELOPMENT IN NIGERIA

Recognizing the essential role of women entrepreneurs and women generally to poverty alleviation and national development, the Nigerian government, through the then National Commission for Women inaugurated the Nigerian Association of Women Entrepreneurs (NAWE) on 28th April 1993. On the 3rd June, 1993, the Nigerian Association of Women Entrepreneurs (NAWE) participated in the inaugural meeting of the Federation of African Women Entrepreneurs (FAWE) where Nigeria was elected the President for a two year renewable term.

Nigeria Association of Women Entrepreneurs is an economic, government initiated organization totally devoted to entrepreneurship development. It is a unique organization of women supervised by the federal government through the ministries of women affairs and commerce and industry. It has the objectives of serving as a Centre for Nigerian Women Entrepreneurs for the promotion of their interests and also providing a forum where Nigerian Women Entrepreneurs exchange ideas, discuss their problems, design and form strategies regarding their business.

The Nigerian government also established in 2003, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) to provide governmental assistance to Micro, Small,
and Medium Enterprises (MSMEs). This organ has contributed immensely to the development of both men and women entrepreneurs in Nigeria by providing start-up capital for many entrepreneurs. Recently, SMEDAN went into partnership with the Microfinance Bank Association of Nigeria with the aim of increasing the accessibility of micro credit to both women and men entrepreneurs.

One of the promising solutions to Nigeria’s economic development and women empowerment today is granting credit facilities and training to rural women who are involved in agricultural activities to enable them to procure simple agricultural implements like hoes, knives, hiring of tractors and purchase of fertilizers. Credit facilities should also be extended to people involved in cottage industries, such as oil-palm extraction and palm kernel cracking and oil presses.

Microfinance strategies have been recognized by national governments, donor agencies, and NGOs as strategies for poverty alleviation, community development, and above all for gender equality and women empowerment.

4.0 TRADE PROMOTION SERVICE FOR WOMEN IN INTERNATIONAL TRADE IN NIGERIA

Nigerian women engage in international trade. However, only very few get national or international recognition (Riddle and Boyede, 2003). While businesswomen have the potential to supply services across borders, many businesses owned by women in developing countries are not exporting. Often, they do not take advantage of the opportunities open to them because they lack confidence or exporting knowledge — problems that can be solved by obtaining training in the skills they need to export their services successfully.
To enhance the increased participation therefore, there is a need to create an umbrella organization for the non-governmental organizations (NGOs) that deal with women entrepreneurs, in order to help coordinate both international assistance and training for women owners of service businesses so that they can organize themselves to be more visible; establish awards programmes; and publicize success stories of Nigerian women who own service firms (Riddle and Boyede 2003).

In addition to these, regular networking events with foreign companies and embassies, emphasis on gender issues in investment promotions, collation of a databank on women international traders should be religiously pursued to enhance the successful and increased participation of women in international trade. The Ministry of Women and youth development should work in collaboration with the Nigerian Investment Promotion Commission and other organizations to promote the potentials of women-owned firms in their literature and also ensure the availability of such literatures in international trade arena and at the Nigerian embassies all over the world.

**Below is a list of suggested Strategies that can be adopted to enhance gender-sensitive entrepreneurship Development and empower women by government and aids organizations/NGOs:**

- The complementary policy issues in entrepreneurship education should include increasing women enrolment in schools at all levels especially in the field of agriculture to reduce gender inequality. Budgetary allocation should be made to accommodate more continuing and vocational education.
• More seminars/workshops should be sponsored and extended to rural areas to increase women’s capacity to start and grow their businesses, prepare sound business plan/feasibility studies and increase their technical and managerial capacity in enterprise development.

• Modern processing plants/storage facilities should be installed for women groups on government/private joint partnership basis so that women can process and store their farm produce with ease for women in agro-enterprise.

• Enabling environment in terms of gender-friendly policies, good roads, pipe-borne water and electricity should be provided by the various arms of government.

• Cooperatives and women groups should be more formally instituted and encouraged to position themselves strategically to access fund and other inputs with ease.

• Banks to be mandated to produce more gender-friendly loan packages (low interest rates and more relaxed duration of repayment).

• Women in agro-enterprises should be exposed to the latest agro-technology from time to time.

• Nigerian women should be encouraged to network more, both at the national and international levels for more exposure, to access funds and export information.

5.0 CONCLUSION

In a globalized world with varying degrees of poverty within and across nations, there is an urgent need to pursue far reaching measures in improving the welfare of the human race. The overall wellbeing of a people plays a significant role in ensuring the security of their lives. It thus implies that security all over the world will be greatly improved through poverty reduction.
Following the discussion trend in this paper, we have been able to establish the invaluable role of entrepreneurship and trade in poverty reduction, possible eradication and subsequently, sustainable development. However, the developmental impact of trade and entrepreneurship cannot be fully maximized unless policies regulating their operations are gender sensitive, accommodating and religiously implemented. This forms the crux of this discussion and I believe that if the suggestions made above are considered, it will be of value in promoting the achievement of the MDGs and sustainable development in Nigeria specifically, and, hopefully, the world at large.

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Measuring the performance of business incubators

A critical analysis of effectiveness approaches and performance measurement systems

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Utilizing performance measurement theories, we critically examine performance measurement literature in the business incubator domain. Papers are identified and selected by examining peer-reviewed journals in entrepreneurship and small business research, publisher-independent databases, and an own literature review. Results are discussed both at the individual and the system level. At the individual level, existing performance measures are examined using the goal, stakeholder, internal process and system resource approach. At the system level, incubator performance measurement systems are evaluated using Tangen's (2004) output prerequisites. Building upon our findings, the contributions for managers, policy makers, educators and (future) researchers are discussed.

Key words: business incubator, performance measurement system, performance measure, goal approach, stakeholder approach, internal process approach, system resource approach

Introduction

The development of adequate performance measures (PMs) and measurement systems (PMSs) has been subject for debate for many decades (Argyris 1952; Drucker 1954; Ghalayini, Noble, and Crowe 1997; Tangen 2004). In particular the alignment of quantifiable measures and the often unanticipated consequences of quantification seems to be an enduring subject of inquiry for both academics and practitioners (Neely 2005). Drucker already highlighted the need for a “balanced” set of measures in 1954. More recently, Johnston and Kaplan (1987) criticize traditional price competition and cost reduction based models, and claim that they are one-dimensional and simplistic.

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The continuing quest for balanced performance measurement resulted throughout the eighties and the nineties in the development of several integrated measurement systems. Examples are the performance pyramid (Lynch and Cross 1991), the results-determinants framework (Fitzgerald et al. 1991), measures for time-based competition (Azzone, Masella, and Bertèle 1991), the performance measurement matrix (Keegan, Eiler, and Jones 1989), Brown’s (1996) inputs, processes, outputs and outcomes framework, and the balanced scorecard (Kaplan and Norton 1992). Franco-Santos et al. (2007), however, indicate that performance researchers did not yet reach definitive conclusions.

Not only in the broad business and management literature (Giannakis 2007), but also within various sub-disciplines, academics argue for a better understanding and development of adequate PMs and PMSs. In incubator literature, researchers stress the importance of performance evaluation. McMullan, Chrisman, and Vesper (2001) explain that “training and assistance programs for practicing entrepreneurs are expensive both in money for sponsors and in time for participants. [Consequently], there is a good reason to evaluate them” (p.37). Tornatzky, Sherman, and Adkins (2002) advocate that performance measurement is necessary for adequate benchmarking practices. Incubator performance measurement, however, is not an easy task. Measuring the effectiveness of start-up assistance programs is often difficult (Sherman 1999). Consequently, there does not (yet) exist consensus concerning incubator performance measurement (Phan, Siegel, and Wright 2005).

In the current paper, we aim at targeting this literature gap, and critically examine existing performance measurement research in incubator literature. For this, we follow Neely’s (2005) suggestion to examine performance measurement both at the individual and the system level, and apply these to incubator performance measurement.

Building upon this, the current paper provides insights for managers, policy makers, educators and researchers. Incubator managers using robust PMs and PMSs are able to better position themselves in the incubator landscape (Tornatzky, Sherman, and Adkins 2002). Moreover, it is widely
acknowledged that adequate PMs and PMSs are a prerequisite for strategy development, implementation and improvement (Giannakis 2007; Kaplan and Norton 1992). Guy (1996), for example, developed two frameworks for evaluating science parks. The first stresses the importance of sound strategic planning, while the second lays emphasis on controlling, retargeting and monitoring. Not only incubator managers, but also firm managers can benefit from robust incubator PMs and PMSs. Bigliardi et al. (2006) state that “firms [...] might benefit from the availability of reliable performance appraisal tools to evaluate [...] [and] guide them in choosing the [appropriate] location [...]” (p. 490). The results of our paper provide incubator and firm managers insights in and a basis for evaluating existing measures and measurement systems. Government-related organizations such as the European Commission (2002) use incubator PMs and PMSs for benchmarking purposes and resource allocation decisions. Drawing upon the results of this paper, they might be able to improve existing benchmarking models. General and entrepreneurship educators can use this paper’s results to underpin the importance of balanced PMs (Neely 2005) and adequate PMSs (Giannakis 2007). Finally, we aim at providing incubator researchers with a critical evaluation of existing performance measures and measurement systems. We argue that depending on the research goal (such as internal process evaluation or goal evaluation), future incubator researchers might apply different performance measures. Furthermore, they might start from our PMS evaluation when elaborating on existing PMSs or developing new ones.

The remainder of the paper is structured as follows: in the second section, we clarify the business incubator concept. Thereafter, a description of the methodology used in the paper is discussed. Following Neely’s (2005) suggestion to examine performance measurement both at the individual and the system level, we examine existing incubator PMs and PMSs in section four. A discussion, conclusion and future research section summarizes our main findings and highlights our contributions for managers, (future) researchers, policy makers and educators.
Theoretical background: business incubators

Small start-up firms contribute considerably to job creation, employment growth (Fonseca, Lopez-Garcia, and Pissarides 2001), and the development of innovative products and services (European Commission 2000). A recent OECD study (2002), however, indicates that on average, one third of new European enterprises does not survive its first year of existence. Moreover, 50-60% does not survive its seventh year of existence.

Stinchcombe (1965) explains the limited survival probability of start-up firms with the “liability of newness” principle. He argues that new organizations suffer a greater risk of failure than older ones, because they generally lack the necessary resources and legitimacy. Although new organizations relatively depend more on the cooperation with external actors, weak ties with these external actors result in ineffective competition against established organizations. Elaborating on the “liability of newness” principle, Freeman, Carroll, and Hannan (1983) examine the importance of size, and introduce the “liability of smallness” principle. Their empirical results on national labor unions, semiconductor electronics manufacturers, and newspaper publishing companies reveal that both age and size influence failure rates.

To counter the high failure rate of small start-up companies, the European Commission (2000) suggests the nurturing of start-up firms in business incubators. Even though results are not always consistent, academic research seems to confirm that start-up companies located in a business incubator have a higher survival rate (Ferguson and Olofsson 2004; Sherman 1999) and sales growth (Löfsten and Lindelöf 2001; 2002), compared to similar start-up companies not located in a business incubator.

2 In incubator literature, start-up companies located in an incubator are called “tenants” or “incubatees”. These terms will be used interchangeable in the present paper.
Even though it is widely accepted that a business incubator is a place where new firms are nurtured to help them survive and grow during their uncertain start-up phases (Bhabra-Remedios and Cornelius 2003), the term business incubator has become an “umbrella word” for a heterogeneous phenomenon (Aernoudt 2004). Hackett and Dilts (2004a) offer a comprehensive incubator definition to counter this heterogeneity problem. It is this definition that will be used during the present paper:

“A business incubator is a shared office-space facility that seeks to provide its incubatees [...] with a strategic, value-adding intervention system [...] of monitoring and business assistance. This system controls and links resources with the objective of facilitating the successful new venture development of the incubatees while simultaneously containing the cost of their potential failure. [...] The incubator is not simply a shared-space office facility, infrastructure and mission statement. Rather, the incubator is also a network of individuals and organizations [...].” (p. 57)

After a literature review, Bergek and Norrman (2008) summarize the services offered by an incubator as follows:

(1) “Shared office space, which is rented under more or less favorable conditions to incubatees,
(2) A pool of shared support services to reduce overhead costs,
(3) Professional business support or advice (“coaching”), and
(4) Network provision, internal and/or external”. (p. 21)

Each of the above incubator services has been examined by academics (Chan and Lau 2005; Hansen et al. 2000; von Zedwitz 2003). Haapasalo and Ekholm (2004), for example, state that the most important factor for incubator success is organised networking. Only a strong network of experts and business contacts can help a start-up company to launch and expand its business.

Methodology

While searching for published material on business incubator PMs and PMSs, articles were selected using the following search terms: (1) “incubator performance”, “incubator impact”,

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“incubator assessment”, “incubator effectiveness” or “incubator efficiency” and (2) “measure”, “system”, “model” or “framework”. The wildcard symbol “*” was utilized to broaden the search. To avoid comparing research results aimed for different phenomena, Bergek and Norrman’s (2008) overview of incubator services was adopted for paper selection. Only papers in which researchers examined incubators offering shared office space, a pool of shared support services, professional business support or advice, and internal and/or external network provision are considered.

The adopted selection path was as follows. First, three publisher-independent article databases were checked: Web of Science (part of the ISI Web of Knowledge database), EbscoHost (Business Source Premier) and Elsevier ScienceDirect. Because this search resulted in a very limited amount of papers, the authors decided to search other articles based on existing incubator literature reviews (such as Aernoudt 2004; Bhabra-Remedios and Cornelius 2003; Hackett and Dilts 2004a) and their own incubator article database. Finally, after the papers from these selections were read, further articles were identified on the basis of their literature lists.

Specifically for incubator performance measurement systems, two additional paper selection requirements are added. First, papers should develop an “original” PMS. Papers using PMSs developed in earlier research are not considered for evaluation. Instead, the original model was identified and evaluated. Second, the assessment framework should at least incorporate more than one performance evaluation perspective. Tangen (2004) explains that in a PMS, “several separate PMs which correspond to diverse perspectives (financial, customer, etc.) are considered independently” (p.729). Therefore, we did not evaluate research in which only one perspective was considered.

3 In Web of Science, the following citation databases were consulted: social science citation index and conference proceedings citation index: social science and humanities. In Elsevier ScienceDirect, both journals and books were considered. In each of the three publisher-independent databases, all available years were searched.
Results

In what follows, an inventory of existing incubator PMs will be given and evaluated. Thereafter, existing PMSs are evaluated using Tangen’s (2004) PMS output characteristics.

Individual level: performance measures

As discussed by various academics (Johnston, Brignall, and Fitzgerald 2002; Neely et al. 2000; Neely 2005) performance research shifted its attention from traditional, cost accounting principles towards more “balanced” sets of measures. Incubator researchers acknowledge the shortcomings of only using financial measures. Voisey et al. (2006) stress that although business incubators are sometimes structured as traditional companies, the majority of incubators are non-profit entities. Consequently, business incubator outputs do not always appear in “traditional” statistical outputs. Examples of benefits not appearing in traditional, financial PMs are benefits from access to affordable office space (Chan and Lau 2005; Lyons 2000) or access to ideas and knowledge (Hansen et al. 2000).

Criticism towards the solely use of financial PMs led to the development of different approaches to measure organizational effectiveness. According to Daft (2009), these approaches can be subdivided into (1) the goal approach, (2) the stakeholder approach; (3) the system resource approach, and (4) the internal process approach. Each approach takes into account a different aspect of organizational effectiveness. Table one provides an overview of the underlying idea of these four approaches. Definitions are based on early performance measurement literature, such as Cameron (1980) and Yuchtman and Seashore (1967).

| TABLE 1 ABOUT HERE |

The subdivision between the goal, stakeholder, system resource and internal process approach can be related to Simons’ (2000) Inputs-Process-Outputs Model. He states that “performance measurement and control information can be understood only by reference to some model of
underlying organizational processes” (p.59). All organizational processes can be subdivided into three main parts: the input, output and process side. Moreover, a manager’s responsibility differs in each of these main parts. Managers are respectively responsible for (1) obtaining appropriate, sufficient and qualitative inputs, (2) maintaining an efficient transformation process, and (3) meeting output specifications. The first can be related to the system resource approach, the second to the internal process approach, and the third to both the goal and the stakeholder approach.

In what follows, a literature review concerning existing business incubator PMs is provided. As will become clear, there exist few validated scales for performance measurement in incubator literature.

**Goal approach.** “Success” refers to (Autio and Klöfsten 1998, p.32) “the degree to which the support arrangement is able to meet the objectives set for it”. Though business incubators seem to have a wide variety of objectives⁴, several incubator studies indicate that an incubator’s ultimate goal should be incubatee survival (Aerts, Matthyssens, and Vandenbempt 2007; European Commission 2002) and growth (Hackett and Dilts 2008). The incubator should be organized in such a way that firm survival and growth are enhanced. In its paper about technology business incubators, Lalkaka (1996) states that “the performance of a business incubator should be measured essentially by the survival and growth of the businesses it incubates” (p.270).

However, some thoughts about “survival” and “growth” should be made. First, there does not seem to exist consensus on how to measure firm growth. Academics use growth measures such as sales growth (Amason, Shrader, and Tompson 2006; Bamford, Dean, and McDougall 1999; Brush and Vanderwerf 1992), cash flow growth (Chandler and Hanks 1993), assets growth (Park and Lee 2000)

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⁴ See Aernoudt’s (2004) incubator typology, based on incubator objectives. According to this author, incubator’s main objectives can be to (1) create start-ups, (2) enhance regional development, (3) create entrepreneurship, (4) integrate social categories, and (5) enhance Blue-Sky research. He labels the incubators respectively mixed, economic development, technology, social and basic research incubators. The latter’s main goal (Blue-Sky research) implies that the incubator tries (Aernoudt 2004, p.129) “to bridge the discovery gap by linking the incubation principle to fundamental research”.  

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and growth in the number of employees (Stuart and Abetti 1987). Which measure is most relevant, is unclear.

Second, the definition of “success” and “failure” is not always used in a univocal way. Several degrees of “success” have been delineated. Avnimelech, Schwartz, and Bar-El (2007) explain that there exist two different degrees of success: “high” and “moderate” success. The first refers to “start-ups which had initial public offerings (IPOs) or were targets of significant acquisition” (p.1183), while the latter refers to “start-ups that did not have IPOs and were not targets of significant acquisition, but are still active” (p.1183). Failure refers to start-ups which were closed.

Perhaps the best developed goal-related measurement scale is developed by Hackett and Dilts (2008). These authors measure business incubation performance in categorical terms of both tenant growth and financial performance at the time of incubatee exit. Table two provides an overview of these categories. Hackett and Dilts (2008) indicate that historically, categories one, two and four were indicated as being “successes”, while categories three and five were “failures”. After analysis, Hackett and Dilts (2004b), however, conclude that outcome three should be considered as being a “success story”, and outcome five as a “failure”. Hackett and Dilts (2008) made this variable operational by asking incubator managers for the total amount of categorical incubatee exit outcomes for a five years period.

TABLE 2 ABOUT HERE

Stakeholder approach. Setting an organization’s objectives implies taking into account context-specific features (Autio and Klöfsten 1998). Neely et al. (2000) state that the wants and needs of stakeholders should be considered when selecting PMs. Incubator researchers, however, do not fully agree on which stakeholders should be taken into account. We detect two viewpoints: researchers claiming to incorporate the wide stakeholder community, and researchers opting for stakeholder limitation. According to McAdam and Keogh (2006), a university incubator’s stakeholders are the
university, local economic development organizations, entrepreneurs, their new firms and employees, investors, and support organizations and services. Mian (1997) further widens the incubator’s community stakeholders, arguing that also citizens, the public, and the private sector should be considered.

Researchers opting for stakeholder limitation do not agree on which stakeholders are most important. Academics opting for the tenant perspective (such as Abduh et al. 2007) examine tenant service satisfaction. Others emphasize that incubators should adapt their services and support to the tenant’s development stage (Chan and Lau 2005). Jungman et al. (2004) claim that besides entrepreneurs, also venture capitalists should be considered. Finally, Haapasalo and Ekholm (2004) and Sherman (1999) focus on government related PMs such as the average number of jobs created, local tax revenue or cost to create jobs.

Our literature review reveals that taking into account different stakeholder perspectives for incubator evaluation is very difficult – if not impossible. Stakeholder goals do not always coincide, which makes one wonder which weight should be attributed to each stakeholder. Entrepreneurs, for example, are primarily concerned with creating a sustainable or growing business, while sponsors are generally more concerned with socioeconomic impacts (Rice, 2002). In our concluding section, we make some suggestions to deal with this problem.

**System resource approach.** Various incubator studies examine an incubator’s resources. Examples are an incubator manager with a broad network (Studdard 2006; Bøllingtoft and Ulhoi 2005), the quality of the management team (Costa-David, Malan, and Lalkaka 2002; Mian 1997), the type and the quality of the incubator’s connection to a university (Tamásy 2007), a professional service network (Lalkaka 1996), initial government funding (Lalkaka 1996), institutional support (Mian 1997) or the incubator’s image/prestige (Mian 1997).
Examining the importance of resources implies studying whether they can result in a sustainable competitive advantage (SCA). According to Barney (1991) only resources which are valuable, rare, imperfectly imitable, and non-substitutable can result in a SCA. To the best of our knowledge, incubator literature does not explain how to measure whether these prerequisites are met. Many researchers fail in valuing the relevant importance of incubator resources. Instead, they restrict themselves to counting the amount of administrative, logistic, business support or networking resources (for example; Chan and Lau 2005; Smilor 1987).

*Internal process approach.* Lalkaka (1996) states that an incubator’s performance depends on “the careful planning and implementation of the incubation process” (p.270). It is not the incubator facility, but the incubation process itself which defines incubator success (Adkins 2001). Costa-David, Malan, and Lalkaka (2002) explain that “the adoption of a business-like approach to running incubators and monitoring clients” (p.8) is a prerequisite for incubator success. Unfortunately, our knowledge on what we know about the incubation process is still very limited, and is often considered as a “black box” (Hackett and Dilts 2008).

Even though early incubator researchers such as Campbell, Kendrick, and Samuelson (1985) and Smilor (1987) developed incubator-incubation configuration frameworks, only Hackett and Dilts (2008) seem to provide validated scales to measure the effectiveness of the internal incubation process. They develop scales measuring selection performance, monitoring and business assistance intensity, and resource munificence. Each of these construct is widely acknowledged as being important in the business incubation process (Bergek and Norrman 2008). Table three provides an overview of the constructs and their definitions.

TABLE 3 ABOUT HERE
**System level: performance measurement systems**

Only measuring inputs, processes and outputs is insufficient to gain control (Simons 2000). Therefore, researchers and practitioners should (1) develop a standard or benchmark, and (2) make sure that there exists an appropriate feedback channel (Simons 2000). The first allows for comparison, while the latter allows for communication and acting upon performance results.

Various performance measurement researchers provide guidelines for the development of such a performance measurement framework (Globerson 1985; Kennerly and Neely 2002; Neely et al. 2000). Neely et al. (2000) categorize these guidelines according to whether they relate to the PMS designing process, or its outputs. Tangen (2004) further examines PMS output characteristics, and provides six important PMS output characteristics. It are these prerequisites which are adopted in the present paper (see table four).

**TABLE 4 ABOUT HERE**

Our incubator literature review resulted in six PMSs in incubator literature. Important to note is that the ultimate goal of the selected papers is not always incubator performance assessment. Löfsten and Lindelöf (2001), for example, provide an incubation process framework, and O’Neal (2005) maps success elements. In their research, however, they make a clear link with possible performance and value added areas. Consequently, we decided to also evaluate them.

Four evaluation models focus on (university-based) technology incubators, one on business incubators in general, and one on science parks. It is remarkable that none of the PMSs focuses on social or economic development incubators. In what follows, each of Tangen’s (2004) PMS output characteristics are discussed.

First, analysis indicates that O’Neal (2005) does not provide an explicit link to the incubator’s strategic objectives. Even though he argues in the main body of the paper that an incubator’s goal is
to reduce “infant mortality among new ventures” (p.11) and three result areas are indicated in the conceptual framework (that is; companies, products, and people), the incubator’s strategic objectives for each of these result areas are not clear. In the other papers considered, the importance of strategic objectives is emphasized referring to management goals (Löfsten and Lindelöf 2001), meeting targets (Voisey et al. 2006), the science park’s real mission/strategy (Bigliardi et al. 2006), the business incubator’s business plan (Lalkaka 2000; 2003) and the fact that the university’s expectations should be taken into account when establishing the incubator’s goals, objectives or strategy (Mian 1997). Especially Bigliardi et al.’s (2006) suggestion to take into account an incubator’s real mission or strategy seems interesting. These authors advocate that it is “often hidden by the formal documents of the organization” (p.492). They highlight that this is necessary to examine an incubator’s actual behaviors (such as decisions and actions taken), instead of looking at formal documents.

Second, all papers focus on different areas of expected results, various stakeholders and various organizational levels. Concerning the difference between short, medium and long term results, only Lalkaka (2000; 2003) provides a possible timeframe for some of the performance measures indicated.

Third, analysis reveals that none of the assessment frameworks discussed provides a link with the impact on employees. Performance measures, however, can greatly impact an employee’s behavior (Fry 1995). When analyzing incubator research, it is striking that very few research focuses on incubator employees. This seems strange, because the importance of service quality and employee behavior in service organization such as business incubators is stressed by various academics. Babbar and Koufteros (2008), for example, examine the human element in airline service quality. Individual attention, helpfulness, courtesy, and promptness are considered being important determinants of customer satisfaction.
Fourth, performance measures are provided by the authors. Only Löfsten and Lindelöf (2001) restrict themselves to general performance and added value areas. As indicated in table five, measure lists are often rather long. Although this seems logical given the fact that many stakeholders and organizational levels are involved in an incubator’s activities, Tangen (2004) emphasizes that a limited number of PMs is necessary to create appropriate action. Using too many PMs increases the risk of information overload.

Fifth, an analysis of the assessment frameworks’ accessibility reveals that some of the performance measures suggested are difficult to obtain. Mian (1997), for example, suggests measuring the incubator’s impact on the university environment. However, due to the large amount of interested parties in the university environment (such as students, professors, technology transfer center), measuring such impact can be very time-intensive and complex. None of the papers provides information regarding how to present the information obtained. Even though a variety of measures is listed by most authors, it is unclear whether certain performance measures should be more emphasized than others. Finally, there exist great differences between framework complexity. While the frameworks from Bigliardi et al. (2006), O’Neal (2005) and Voisey et al. (2006) are straightforward and easy to understand, the other frameworks are rather complex. Of course, this complexity implies that they are relatively more comprehensive. It however also implies that results are more difficult to understand.

Sixth, none of the papers provide information concerning who should collect the data, with what frequency and how to act on the measure. Lalkaka (2000) stresses the importance of pre-identification of progress and performance “markers”, interpretation, and follow-up of the results. Specific targets, timeframes and feedback loops, however, lack in most of the papers.

In conclusion, applying Tangen’s (2004) output criteria to incubator PMSs reveals that – to the best of our knowledge – there does not yet exist an evaluation system fulfilling these criteria. In
particular the influence of measurement systems on employee behavior, system accessibility and its comprehensibility are under-researched domains.

**TABLE 5 ABOUT HERE**

**Discussion, Conclusion and Future Research**

The above discussion clearly indicates that there does not yet exist consensus concerning how to measure incubator performance. Most incubator researchers and practitioners seem to only use one or a few indicators for incubator evaluation (Schwartz and Göthner 2009). Moreover, integrated incubator performance measurement systems do not fulfill Tangen’s (2004) PMS output requirements.

Concerning the use of only one or a few indicators for incubator evaluation, incubator researchers indicate that the usage of only one measure is insufficient to grasp business incubator performance (Schwartz and Göthner 2009). Moreover, it limits the outcome’s explanatory power. Schwartz and Göthner (2009) try to address this problem by applying the PROMETHEE (Preference Ranking Organization Method for Enrichment Evaluation) method for incubator evaluation. In short, the authors use six criteria to statistically compare the performance of various business incubators. The criteria applied are (1) average incubation time, (2) share of start-ups, (3) share of high-tech firms, (4) client satisfaction, (5) overall survival, and (6) employment growth after graduation.

Applying the PROMETHEE method seems interesting for multicriteria evaluation. The criteria applied by Schwart and Göthner (2009), however, mainly focus on the output side of the organizational process model (Simons 2000). The internal process and system resource approach are not considered. Examining an organization’s effectiveness, however, requires in-sight in the goal, stakeholder, internal process and system resource approach (Daft 2009).
Although we agree with the fact that ideally, all four effectiveness approaches should be applied simultaneously, we argue that this also has its drawbacks. Using too many performance measures often results in information overload and ignoring data (Tangen 2004). Appropriate analysis and action is only possible when the amount of performance measures considered is limited to the most important measures. Therefore, we suggest future researchers, practitioners and policy makers to refer to Simons (2000) Inputs-Process-Outputs model and the effectiveness approaches when choosing appropriate incubator performance measures. When examining an incubator’s input effectiveness, they might focus on system resource PMs (such as the availability of an incubator manager with a broad network, or the quality of the incubator’s connection to the university). Measuring an incubator’s process effectiveness would imply using internal process PMs, such as Hackett and Dilts (2008) validated internal process scales. Finally, focusing on the output side of an incubator’s effectiveness would imply considering goal (such as firm survival and growth) and stakeholder (such as tenant satisfaction) PMs.

For each of the effectiveness approaches, we suggest future researchers to develop validated scales. As indicated, Hackett and Dilts (2008) seem to be the only incubator researchers who developed validated scales for the goal and internal process approach. Future researchers might use these scales, whereas academics focusing on the system resource and stakeholder approach might opt for scale development. For the stakeholder approach, they can start from Aernoudt’s (2004) incubator typology, after which the relative importance of each stakeholder might be researched separately for each incubator type. Economic development incubators, for example, might ascribe relatively more weight to government related measures than basic research incubators. For the system resource approach, we suggest future researchers to focus on the prerequisites for sustainable competitive advantages in the incubator context.

Concerning incubator performance measurement system development, we suggest future incubator researchers, practitioners and policy makers to apply Tangen’s (2004) PMS output
prerequisites. Developing a PMS fulfilling these requirements facilitates and enables benchmarking practices and stimulates continuous improvement (Neely et al. 2000). We argue that future researchers willing to develop an incubator PMS might start from the incubator’s objectives. Indeed, a first step in measuring performance is looking at the organization’s strategic objectives (Hudson, Smart, and Bourne 2001; Ittner and Larcker 2003). What makes up the content of success or effectiveness of an incubator should be clear before adequate PMSs can be developed (Mian 1996; Albert and Gaynor 2003; Phan, Siegel, and Wright 2005; Siegel, Westhead, and Wright 2003). Since Aernoudt (2004) developed an incubator typology based on incubator objectives, we suggest future researchers to develop separate PMSs for each incubator type. Our incubator PMS evaluation reveals that – to the best of our knowledge – there does not yet exist an evaluation framework for economic development and social incubators. Therefore, we suggest future researchers to simultaneously improve existing PMSs for technology, basic research or mixed incubators, and develop new PMSs for social and economic development incubators.

To conclude, we briefly summarize our contributions to educators, policy makers, managers, and researchers. The first can apply the results of this paper to underpin the importance of balanced PMs and adequate PMSs, while the last three can adopt our results to improve existing measurement systems and performance measures. This, in turn, can support policy makers in benchmarking studies and resource allocation decisions. Incubator managers might be able to better position themselves in the incubator landscape, and they might be better able to develop, implement and improve strategies. Finally, firm managers using the results of this paper can better choose an appropriate business incubator location.
### Tables

#### Table 1
**Effectiveness approaches**

<table>
<thead>
<tr>
<th>Effectiveness approach</th>
<th>Underlying idea</th>
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<tr>
<td><strong>Goal approach</strong></td>
<td>The degree of realization of an organization’s objectives. The closer the organization meets its goals, the more effective it is.</td>
</tr>
<tr>
<td><strong>Stakeholder approach</strong></td>
<td>The extent to which all the organization’s strategic constituencies are at least minimally satisfied. Strategic constituencies are all groups of individuals who have some stake in the organization. The closer the organization meets stakeholder satisfaction, the more effective it is.</td>
</tr>
<tr>
<td><strong>System resource approach</strong></td>
<td>The extent to which an organization acquires its needed resources. The more success an organization has in competing for (and acquiring) scarce resources, the more effective it is.</td>
</tr>
<tr>
<td><strong>Internal process approach</strong></td>
<td>The extent to which an organization is internally healthy and efficient. The “healthier” an organization operates, the more effective it is.</td>
</tr>
</tbody>
</table>

#### Table 2
**Business incubation performance (Hackett and Dilts 2008)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Success/failure</th>
<th>Incubatee outcome state</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Success</td>
<td>The incubatee is surviving and growing profitably</td>
</tr>
<tr>
<td>2</td>
<td>Success</td>
<td>The incubatee is surviving and growing and is on a path toward profitability</td>
</tr>
<tr>
<td>3</td>
<td>Success</td>
<td>Incubatee operations were terminated while still in the incubator, but losses were minimized</td>
</tr>
<tr>
<td>4</td>
<td>Failure</td>
<td>The incubatee is surviving but is not growing and is not profitable or is only marginally profitable</td>
</tr>
<tr>
<td>5</td>
<td>Failure</td>
<td>Incubatee operations were terminated while still in the incubator, and the losses were large</td>
</tr>
</tbody>
</table>

#### Table 3
**Business incubation constructs and definitions (Hackett and Dilts 2008)**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection performance</td>
<td>Selection performance refers to the degree to which the incubator behaves like an “ideal type” venture capitalist when selecting emerging organizations (options) for monitoring and business assistance and resource infusion</td>
</tr>
<tr>
<td>Monitoring and business assistance intensity</td>
<td>Monitoring and business assistance intensity refers to the degree to which the incubator observes and assists incubates with the development of their ventures, including helping them to learn from low-cost failures and containing the cost of potential terminal failure</td>
</tr>
<tr>
<td>Resource munificence</td>
<td>Resource munificence refers to the incubator’s resource availability, quality and utilization</td>
</tr>
</tbody>
</table>
Table 4
Performance measurement system output characteristics (Tangen, 2004)

<table>
<thead>
<tr>
<th>PMS output characteristic</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support strategic objectives</td>
<td>The PMS should support the organization’s strategic objectives, and should be flexible enough to allow for strategic changes</td>
</tr>
</tbody>
</table>
| Have an appropriate balance | The PMS should have an appropriate balance, and should incorporate:  
  - Short- and long-term results,  
  - Different types of performance (for example; cost, quality, delivery, flexibility and dependability),  
  - Various perspectives (such as the customer, the shareholder, the competitor, the internal and the innovativeness perspective), and  
  - Various organizational levels (for example; global and local performance) |
| Guard against sub-optimization | The PMS should guard for the “productivity paradox” (Skinner 1986)\(^a\). Avoiding sub-optimization can be done by establishing a clear link between the company’s top and bottom |
| Have a limited number of performance measures | The PMS should not constitute of too many performance measures, because this could result in ignoring data or information overload |
| Be easily accessible | The PMS should provide information “at the right time, to the right person” (p.728). The necessary information should be easily obtainable, it should be presented in an accessible way, and it should be easily understandable |
| Consist of performance measures that have comprehensible specifications | The PMS performance measures’ purpose should be clearly defined. It should be clear who will use and act upon the performance measure. This implies that appropriate targets and timeframes for target reaching should be developed |

\(^a\) Skinner’s (1986) “productivity paradox” refers to the fact that poor performance measures might have negative impacts on employee behavior.
Table 5
Performance measurement systems in incubator literature

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Science parks</td>
<td>Technology business incubators</td>
</tr>
<tr>
<td>Strategic objectives?</td>
<td>Real mission/strategy is taken into account</td>
<td>Feasibility and development of business plan is taken into account</td>
</tr>
<tr>
<td>Balance?</td>
<td>Different areas of expected results (for example; SP patrimonial structure, SP internal development, economic-financial impacts)</td>
<td>Different areas of expected results (impact, effectiveness and sustainability)</td>
</tr>
<tr>
<td></td>
<td>Various stakeholders, although the main stakeholder (that is; patrons of a parks’ main activities) is considered most important</td>
<td>Various stakeholders (such as the entrepreneur, university/research institute, federal, state and city government)</td>
</tr>
<tr>
<td></td>
<td>Various organizational levels (such as incubatee, science park, inter-regional, international)</td>
<td>Various organizational levels (for example; entrepreneur, community, private sector, national or export market, work force, etc...)</td>
</tr>
<tr>
<td></td>
<td>No specific reference to the difference between short, medium or long term results</td>
<td>Possible timeframe for some of the performance measures</td>
</tr>
<tr>
<td>Sub-optimization?</td>
<td>No link with impact on employees</td>
<td>No link with impact on employees</td>
</tr>
<tr>
<td>Number of measures?</td>
<td>Long list of possible performance indicators</td>
<td>Long list of possible performance indicators</td>
</tr>
<tr>
<td>Accessibility?</td>
<td>Information easily retrieved? Some of the indicated performance measures are difficult to obtain (for example; possible firm networks feeded by the SP)</td>
<td>Information easily retrieved? Some of the indicated performance measures are difficult to obtain</td>
</tr>
<tr>
<td></td>
<td>Usefully presented? Variety of separate measures – no conclusion</td>
<td>Usefully presented? Variety of measures is provided – no conclusion</td>
</tr>
<tr>
<td></td>
<td>Easily understood? Simple framework</td>
<td>Easily understood? Complex framework</td>
</tr>
<tr>
<td>Comprehensible performance measures?</td>
<td>Clear purposes? Yes</td>
<td>Clear purpose? Yes</td>
</tr>
<tr>
<td></td>
<td>Not defined who will collect the data, with what frequency, and how to act on the measure (feedback loop)</td>
<td>Not defined who will collect the data, with what frequency, and how to act upon the measures (feedback loop)</td>
</tr>
<tr>
<td></td>
<td>No link with specific targets (what is good/bad?) and timeframes</td>
<td>Only for a few performance indicators, specific targets and timeframes are provided</td>
</tr>
</tbody>
</table>

*With regard to the developed PMS – *a* The conceptual model developed is evaluated. Each performance evaluation system described in the case studies can slightly differ compared to the conceptual model.*
<table>
<thead>
<tr>
<th>Research type</th>
<th>Löfsten and Lindelöf 2001</th>
<th>Mian 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conceptual incubation process framework</td>
<td>Conceptual assessment framework + application: multiple case studies</td>
</tr>
<tr>
<td>Focus</td>
<td>Technology business incubator (new technology-based firms)</td>
<td>University technology business incubator (UTBI)</td>
</tr>
<tr>
<td>Strategic objectives?</td>
<td>Management goals are taken into account</td>
<td>Motivations university are taken into account – UTBI acts upon these expectations, when establishing its goals, objectives or strategy</td>
</tr>
<tr>
<td>Balance?</td>
<td>Different areas of expected results (firm growth and profitability, program growth and sustainability, community-related impacts)</td>
<td>Different areas of expected results (performance outcomes, management policies and structures, provision of services and their value-added)</td>
</tr>
<tr>
<td></td>
<td>Various stakeholders (such as the public sector, private sector, universities, science parks, government, entrepreneurs)</td>
<td>Various stakeholders (for example; sponsoring university, entrepreneurs, public sector, private sector, citizens)</td>
</tr>
<tr>
<td></td>
<td>Various organizational levels (performance tenants, incubator, community)</td>
<td>Various organizational levels (performance tenants and incubator, university, community)</td>
</tr>
<tr>
<td></td>
<td>No specific reference to the difference between short, medium or long term results</td>
<td>No specific reference to the difference between short, medium or long term results</td>
</tr>
<tr>
<td>Sub-optimization?</td>
<td>No link with impact on employees</td>
<td>No link with impact on employees</td>
</tr>
<tr>
<td>Number of measures?</td>
<td>No list with specific performance indicators, only general performance and added value areas</td>
<td>Conceptual model: no list – case studies: large amount of performance measures</td>
</tr>
<tr>
<td>Accessibility?</td>
<td>Information easily retrieved? Unclear (only general performance and added value areas)</td>
<td>Information easily retrieved? Some of the performance measures are not easily retrieved (for example; impact on university environment)</td>
</tr>
<tr>
<td></td>
<td>Usefully presented? No, only general information</td>
<td>Usefully presented? Variety of measures – no conclusion</td>
</tr>
<tr>
<td></td>
<td>Easily understood? Rather complex framework</td>
<td>Easily understood? Complex framework</td>
</tr>
<tr>
<td>Comprehensible performance measures?</td>
<td>Clear purposes? No, only general information</td>
<td>Clear purposes? Yes</td>
</tr>
<tr>
<td></td>
<td>Not defined who will collect the data, with what frequency, and how to act on the measure (feedback loop)</td>
<td>Not defined who will collect the data, with what frequency, and how to act on the measure (feedback loop)</td>
</tr>
<tr>
<td></td>
<td>No link with specific targets (what is good/bad?) and timeframes</td>
<td>No link with specific targets (what is good/bad?) and timeframes</td>
</tr>
</tbody>
</table>

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*a* With regard to the developed PMS – The conceptual model developed is evaluated. Each performance evaluation system described in the case studies can slightly differ compared to the conceptual model.
<table>
<thead>
<tr>
<th>Research type</th>
<th>O’Neal 2005</th>
<th>Voisey, Gornall, Jones and Thomas 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual framework for a successful university-based technology incubator + application: case study</td>
<td>Conceptual assessment framework</td>
<td></td>
</tr>
<tr>
<td>Focus</td>
<td>University-based technology incubator</td>
<td>Business incubator</td>
</tr>
<tr>
<td>Strategic objectives?</td>
<td>No</td>
<td>Yes, one of the possible performance measures is “meeting targets”</td>
</tr>
<tr>
<td>Balance?</td>
<td>Different areas of expected results in case study (such as job creation, economic impact, intellectual capital clients)</td>
<td>Incubator and incubatee-related areas of expected results</td>
</tr>
<tr>
<td></td>
<td>Various stakeholders (for example; university, funding organizations, entrepreneurs)</td>
<td>Various stakeholders (for example; enterprise support community, incubator, incubatee)</td>
</tr>
<tr>
<td></td>
<td>Various organizational levels (companies, people, products)</td>
<td>Focus on two organizational levels: incubator and incubatee</td>
</tr>
<tr>
<td></td>
<td>No specific reference to the difference between short, medium or long term results</td>
<td>No specific reference to the difference between short, medium or long term results</td>
</tr>
<tr>
<td>Sub-optimization?</td>
<td>No link with impact on employees</td>
<td>No link with impact on employees</td>
</tr>
<tr>
<td>Number of measures?</td>
<td>Description of case study provides information concerning performance measures: rather large amount of aggregated incubator data</td>
<td>Long list of possible performance indicators</td>
</tr>
<tr>
<td>Accessibility?</td>
<td>Information easily retrieved? Yes, incubator performance data can be retrieved from tenants</td>
<td>Information easily retrieved? Some of the performance measures are not easily retrieved (such as increased client confidence in self and business)</td>
</tr>
<tr>
<td></td>
<td>Usefully presented? List of performance measures – no conclusion</td>
<td>Usefully presented? List of performance measures – no conclusion</td>
</tr>
<tr>
<td></td>
<td>Easily understood? Rather simple framework</td>
<td>Easily understood? Simple framework</td>
</tr>
<tr>
<td>Comprehensible performance measures?</td>
<td>Clear purposes? Yes</td>
<td>Clear purposes? Yes</td>
</tr>
<tr>
<td></td>
<td>Not defined who will collect the data, with what frequency, and how to act on the measure (feedback loop)</td>
<td>Not defined who will collect the data, with what frequency, and how to act on the measure (feedback loop)</td>
</tr>
<tr>
<td></td>
<td>No link with specific targets (what is good/bad?) and timeframes (although the importance of targets is stressed)</td>
<td>No link with specific targets and timeframes</td>
</tr>
</tbody>
</table>

* With regard to the developed PMS – The conceptual model developed is evaluated. Each performance evaluation system described in the case studies can slightly differ compared to the conceptual model.
Bibliography


Identifying factors for the successful adoption of e-business by SMEs in developing economies: the case of SMEs in Morocco

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Abstract:
This work empirically investigates the determining factors of the successful adoption of e-business by small and medium enterprises (SMEs) particularly, those in developing countries such as Morocco. According to the literature on technological innovation and country-specific features of the environment business in Morocco, several variables were identified, such as managers knowledge and attitude, organizational features, technological characteristics and environmental specificities were identified to conduct our six-month questionnaire survey carried out on 150 Moroccan SMEs. The study shows that the important critical success factors for the adoption of e-business by Moroccan SMEs are mainly the policies supporting e-business promotion and adoption, firms culture and managers’ knowledge of ICTs and e-business. Some best practices and guidelines required to succeed the adoption of e-business by SMEs in developing economies such as Morocco, are also presented in this report.

Keywords: Developing economies, E-business, Morocco, SMEs

I. Introduction
The aim of this paper is to identify the main factors leading to the adoption of e-business by small and medium enterprises (SMEs) in Morocco. Since its inception, the concept of “e-business” has triggered many passions, thoughts, actions and innovations
marked on one hand by the advent of the new economy, with its corollary, the emergence of high tech start-ups and, on the other hand by bursting of the bubble created ten years ago by the speculative euphoria engendered by the new virtual economy.

Many studies (OECD 2002, and OECD 2004) provide evidence of the positive impacts of ICTs and e-business strategies on the firm. Since SMEs currently represents 92% of companies in the productive Morocco, one quickly realizes that one of the greatest challenges of the early 21st century lies in the promotion of e-business among SMEs in developing countries.

Aware of this issue, the Moroccan Government established the legal basis to help and assist the promotion of ICT’s and e-business in SMEs ten years ago, however, as any developing country, some Moroccan laws are biased and ambiguous. Sometimes even though the law is clear, the implementation is absent or precarious.

Moreover, one cannot consider the Moroccan government as a scapegoat for the non-adoption of e-business nor the failure of its integration; because other barriers have been mentioned in several studies. The OECD report (2004) on ICT, e-business and SMEs for instance, listed many such barriers, as the unsuitability of the type of business (lack of awareness of the benefits of e-business), absence of enabling factors (SMEs generally lack the human technological skills and managerial knowledge needed for ICT and e-business implementation), cost factors and concerns about internet security and trust.

Thus, the implementation of effective strategies for developing e-business for SMEs in Morocco requires the identification of the main determinants of successful e-business adoption by small and medium enterprises in developing countries.

The main issue to be examined in this article is “How to succeed the adoption of e-business by SMEs in developing economies such as Morocco?”. The article is organized as following. Section II presents several factors considered by the literature as affecting the
adoption of e-business and adds diverse country-specific features of Morocco. Section III describes the methodology followed to lead our survey. In section IV, our survey results will be analyzed leading to the conclusion, in section V, on which are the determining factors for successful adoption of e-business and some best practices in the studied context.

II. Theoretical Foundation

The literature suggests many definitions of e-business. One of the first to use the term was the IBM company, which considers the development of intranets and extranets to be part of e-business. E-business is elsewhere defined as the use of electronic means to conduct an organization’s business internally and externally, such as business-to-business (B2B) and business-to-consumer (B2C) via internet. (Hook, F. 2000; OECD, 1999; Jelassi, T and Enders, A. 2004). A more comprehensive definition of e-business is: “The transformation of an organization’s processes to deliver additional customer value through the application of technologies, philosophies and computing paradigm of the new economy” (Andam, Z. Ruth. 2003).

E-business is an important form of technological innovation based on Information Technology (IT). Analyzing the adoption of e-business is linked with the adoption of innovation and IT. According to the literature on technological innovation, several variables have been identified as possible determinants of the adoption of an innovation. Kimberly & Evanisko (1981) listed three predictors of technological innovation adoption: individual, organizational and contextual factors. Lakhanpal (1994) has classified variables affecting innovation adoption into four categories: individual factors, organization factors, environmental factors and characteristics of the innovation itself. Motivated by the fact that decision-making in SMEs is dominated by the owners/managers (Thong & Yap, 1995),

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1 e-Business definition sponsored by SearchCIO.com, powered by WhatIs.com an online computer dictionary.
Rogers (1995) proposed a model of the innovation-decision process that emphasizes the role of individual behaviour in the technology adoption process by introducing five factors necessary for adoption of innovation:

- **Relative advantage**: Maintaining or/and increasing profitability, improving product-service quality, raising flexibility and reducing costs push managers to adopt new techniques (Howard, 1977; Rogers, 1995; Geroski, 1995).

- **Compatibility**: How innovation is compatible with the firm values, beliefs and culture.

- **Complexity**: The degree of insight vis-à-vis an innovation. Some innovation are readily understood, other are more complicated.

- **Trialability**: Rogers (1995) defined it as new ideas that can be tried will generally be adopted more rapidly than innovations that cannot be given a small-scale trial.

- **Observability**: How much the results of innovations are visible to others (Rogers 1995).

Roger’s model relates actions and choices during which an individual evaluates a new innovation and decides whether or not to incorporate it by assessing those five variables.

On analyzing IT adoption by firms, several authors (Iacovou et al. 1995, Lin and Lin 2008, Pan and Jang 2008, Oliveira and Martins 2010) used the TOE framework, developed by Tornatsky and Fleisher (1990) as a set of three variables that may influence e-business adoption: technological context (technology readiness\(^2\) and technology integration), organizational context (firm size, expected benefits and obstacles of e-business) and environmental context (internet penetration and competitive pressure). La Rovere (1996) suggested that the ability of SMEs to innovate or adopt new IT depends on several variables: internal and external factors to the organizations, their countries’ culture and governmental policies. Thong (1999) listed four factors for the adoption of information system: manager

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\(^{2}\) Mata et al. 1995 define technology readiness as “human resources that are complementary to physical assets”
characteristics, information system characteristics, environmental characteristics and organizational characteristics.

Based on the theoretical background, our study adopts four main variables influencing the adoption of e-business into small and medium enterprises: organization characteristics (size and expected benefits and obstacles of e-business), technological characteristics (employees’ knowledge of IT and e-business), environmental characteristics (Moroccan Government support for e-business) and manager/owner entrepreneurs knowledge and attitude regarding IT and e-business.

In addition, we include country-specific characteristics of Morocco which are thought to have affected e-business adoption by SMEs. The most of the IT activities take place in the cities of Casablanca and Rabat (Tourougui 2002) where the infrastructure is at its best and where most of the business and government decision-making takes place.

Several statistical reports (ANRT and ITU) allowed us to analyze the IT landscape in Morocco via which we look at factors’ strengths and weaknesses influencing the e-business adoption. Morocco's successful implementation of its liberalization reforms, its geographical location, the government initiatives to promote IT, the growing internet culture, the high mobile phone penetration, the political stability and the bilingual culture (Arabic and French) are the main strengths. Whereas the major weaknesses are the shortage of educated and skillful workforce, the weak banking system to support e-commerce activities and low literacy rates.

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5 Morocco, Leaving the Others Behind; from Letters from the Field. Available on http://www.itu.int/ITU-D/ict/cs/letters/morocco.html
III. Survey Instrument and Method:

The population for the study consists of SMEs operating in Morocco. Small and medium enterprises have been defined by the Moroccan ministry of economy as follows. A small and medium enterprise is one that employs less than 200 employees with a turnover of less than five million DH (500,000€) in the creation phase, 20 MDH (2M€) for the growth phase and 50 MDH (5M€) for the maturity phase.

The sample size was fixed at 350 and selected from the SME database available from the chamber of Commerce and the Moroccan ministry of economy reports. These noted that there are more than 70000 SMEs in the country, with more than 60 percent located in the axis Rabat-Casablanca, hence, we have randomly chosen our sample from the axis.

A four-page questionnaire containing a total of 31 questions on firm-specific information, managers’ attitude and factors influencing the decision of e-business adoption, was prepared based on literature review and a pilot study in which eleven SMEs’ managers participated. Then, the questionnaires were mailed twice\(^6\) and e-mailed once—based on mail addresses and e-mails provided by the database—to the managers of more than 350 SMEs. Selected managers were asked to return the completed questionnaires within the week. A stamped return envelope was included with each mailing.

All the responses received were analyzed, then data entry and processing were carried out using the computer application Sphinx Lexica that allows for qualitative studies and the processing of textual data. It facilitates the design and formatting of questionnaires, online distribution, response gathering, processing and analysis. It combines quantitative aspects through the basic methods, multivariate analysis, decision trees, concept maps, and by qualitative textual analysis, lexical, syntactic and content. Finally, it allows the presentation and communication of results. (Wanlin 2007; Le Sphinx 2003).

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\(^6\) A double mailing was used in order to increase the response rate (Moser and Kalton, 1971).
IV. Data Analysis

Of the 350 questionnaires posted and e-mailed, 46 were returned marked ‘wrong address’ or “Delivery Status Notification (Failure)”. A total of 93 completed forms were received from the first mailing and a further 69 were received from the second mailing. Of the 162 questionnaires that were returned after follow up, twelve questionnaires were either incomplete or returned blank, leaving 150 questionnaires for further processing. The overall apparent response was thus 42 percent (150 responses out of 350).

In order to resolve the issue of “non-responses” we adjusted the sample by the weighting method that allowed us to reduce some of the bias by correcting the distortion due to an under representation of the population.

Profile of respondents

Of the 150 SMEs managers who answered this questionnaire, 67 percent have their business located in Casablanca while 33 percent in Rabat. Three sizes of SMEs were listed: SMEs with less than 10 employees represent 13 percent, SMEs with a number of employees between 10 and 50 represent 33 percent, and finally SMEs with a number of employees between 50 and 200 represent 54 percent.

An other feature of participating SMEs is their limited turnover. Based on the definition of SME given by the ministry, we have segmented the participants in three categories. 53 percent of SMEs have a turnover of less than 500000€, 33 percent have a turnover between 500000€ and 2M€ and finally, only 13 percent have a turnover between 2M€ and 5M€.

SMEs participating in this survey operate into three main sectors: 59 percent are in commerce and trade and services, 27 percent are agribusiness companies, and only 14 percent are manufacturing enterprises.
IT Platform features

Our survey indicated that all SMEs have some sort of IT platform; concerning this aspect, two factors are noteworthy. First of all, collected data showed that 74 percent of SMEs have acquired this technology during the last five year, while 26 percent stated that they have had it for 10 years. The second factor is the number of computer that each SME has. More than 50 percent of SMEs have less than five computers, while 33 percent have less than 10 and finally only 13 percent of SMEs have more than 10 computers.

Moreover, the use of this platform is limited to the internal functions in 62 percent of the SMEs; only 38 percent indicated the use of IT platform for both internal and external activities.

Only 10 percent of Moroccan SMEs have an enterprise resource planning (ERP) and just two percent have an e-commerce application. This slight tendency for electronic commerce is due to the lack of legal safeguards and appropriate solutions online payment in electronic transactions.

Usage of Internet

Respondents were asked to indicate if they had internet, which type of device they used and if whether they had a web page. Our survey showed that only six percent of SMEs have no access to the internet. Among the 94 percent having internet, 50 percent were connected to the internet through GPRS devices, 28 percent via USB modems and 21 percent using Wi-Fi systems.

Out of 141 respondent that confirmed having internet, only 12 percent said they had a web page, while one respondent answered that he didn’t even know whether his SME had a web page or not.
E-business adoption factors

Various variables have been identified through our survey to give a general idea about factors motivating the Moroccan SMEs managers to apply ICTs in support of all the activities of business. E-business adoption variables were measured on a five-point Likert type scale (1 = least important, scarce and weak, 5 = most important, abundant and strong).

Satisfying customer demand and increasing market share are the major factor evaluated as most important by Moroccan SMEs managers, reducing operating costs comes in the second rank, fastening operations with suppliers is judged as moderately important to adopt e-business. On the other hand, improving quality offered to customer on line and reducing costs associated with sales and purchasing are considered respectively less important and the least important factor pushing managers to adopt e-business.

Managers’/owners and employees IT/e-business Knowledge

Respondents were asked to evaluate their knowledge regarding IT/e-business as well as the knowledge of their employees. Collected data showed that 73 percent of managers admitted that they had a low IT/e-business knowledge, while 20 percent had average knowledge and only six percent of respondents thought they had deep IT/e-business knowledge.

From our survey, we infer that generally employees are slightly more skilled than managers in term of IT/e-business, since employees with average knowledge were present in 33 percent of SMEs (against 20 percent of managers).

E-business learning programs

Since the fact that SMEs are characterized generally by a low knowledge of IT/e-business, we asked respondents if they implement e-business learning programs, if yes, who is in charge of that, otherwise justifying why not. Only 46 percent of SMEs who implemented an e-business learning program in order to manage well their IT/e-business platforms.
However, out of these 46 percent, 42 percent mentioned that the learning program is done by skilled people working inside company and only seven percent that benefit from governmental programs, which leads 50 percent of SMEs to appeal universities (21 percent) and private incubators (29 percent) to give them such learning programs. Those that don’t have any learning program justify their decision among three main factors. 53 percent related the non-implementation to the high cost, while 26 percent said that implementation complexity is the major issue. Finally 20 percent though it is not useful.

**E-Business adoption barriers**

Also in this case, the Non-adoption of e-business variables were measured on a five-point Likert type scale (1= least important, scarce and weak, 5= most important, abundant and strong).

Based on the Likert analysis, the top four ranked factors that more than 70 percent of Moroccan SMEs managers believed as the major obstacles to adopt e-business descending order, were as follows: technology costs associated with e-business development, IT skills and knowledge shortage among the workforce, weak public telecommunication infrastructure decreasing technological development and the lack of management willingness to adopt IT.

The remaining three factors were respectively e-business development offers no tangible benefits, the lack of triability and the risk of confidentiality and hacking. However, they were marginal variables and were considered as unimportant factors.

**Government support for e-business**

SMEs’ CEOs surveyed were asked about the role of the Moroccan Government to support them vis-à-vis the adoption of e-business. 53 percent of respondents said that the Government doesn’t play any role, while the rest confirmed that it is rarely that Government support them.
As asked about their opinion regarding the appropriate measures that should be taken at Government level to support the implementation and development of E-Business in their SMEs, CEOs have listed five main policies. 23 percent are seeking financial assistance measures, 21 percent are expecting the decrease of taxes in order to well implement e-business strategies and platforms, 19 percent believe that Government should support them by creating special fund for e-business learning programs, while seven percent think that Governmental support could be through incentive laws and policies motivating SMEs to successfully adopt and develop e-business. Moreover, 28 percent of respondents underlined the importance of competence centers and business incubator and their role on e-business adoption, which lead them to perceive that Government must encourage and widen the creation of these kind of organizations.

V. Conclusion and Best Practices

This study investigated the main determining factors for the successful adoption of e-business by SMEs in Morocco using survey data. From the literature review and some specific features related to Morocco we have identified a list of determining factors. Then we conducted empirical tests to extract the determinants and confirm their empirical evidence.

The empirical results indicate that the successful adoption of e-business in SMEs depends on many factors. The important determinants include SMEs’ managers’ characteristics, namely their knowledge of ICTs and e-business; the environmental characteristics basically the Government support and the organization characteristics, as the implementation costs and employees’ knowledge. While technological characteristics don’t seem to play an important role in the adoption of e-business by Moroccan SMEs.

In Moroccan SMEs, CEOs are reluctant to change their businesses because e-business often involves their organization and management of information. Thus, their approaches are
slow and their brakes are deep, and the uses are still in their infancy. However, they are aware that if they want to go beyond the existing domains, e-business today could be the only way to do it. However, adopting successfully e-business is not easy, only SMEs which have knowledgeable and wise CEO appreciate the real benefits and advantages of the e-business adoption, invest huge amounts of investments and receive significant Governmental support either financial support or non-financial one as learning programs for employees, and sometimes both kind of assistance are available. These lucky SMEs are very few in Morocco, but integrate e-business as strategic pillar for enhancing their market openness, and increase their competitive advantage.

From our study, several recommendations for best practices are suggested. First, the majority of Moroccan SMEs managers are unaware of the great benefit of e-business, that requires the promotion of this awareness via information and training programs. Second, successful adoption of e-business is related with knowledgeable managers and employees, which means that universities and private incubator should design learning programs well adopted with Moroccan SMEs culture and features. Third, the cost of e-business adoption (Initial investment, learning program costs, maintenance cost, etc.) plays an important barrier, then banks and financial organisms should target SMEs by offering them long-term credits with low interest. Finally, the Government has the responsibility to develop the IT infrastructure, widen the IT education in high school and universities, and of course, Government is expected to reduce the e-business adoption barriers by supporting SMEs through the creation of special funds to finance e-business adoption projects, and building more incubators not only in the Casablanca-Rabat axis but also in other cities.
References:


Abstract

Much of the small business literature has shown that small businesses, particularly home-based businesses, are less likely to export than businesses that have greater than 20 employees. However, the growing internationalisation of small and home-based business (HBB) and advances in Information Communication Technologies (ICT) suggest that some HBBs may break the conventional wisdom of 'size matters' and access international markets. In this paper we discuss the characteristics of a sample of 978 home-based businesses in order to identify their propensity to export.

Introduction

A recurrent theme in the literature is that small businesses are less likely to be export orientated than businesses with more than 20 employees (ABS 2010; Majocchi, Bacchiocchi, & Mayrhofer 2005; Mittelstaedt, Harben, & Ward 2003; Singh 2009). In fact, Mittelstaedt, Harben, & Ward (2003 p.82) put forth some bad news for small-scale operators, particularly micro and home-based businesses (HBB) with export aspirations: “The bad news for most firms with fewer than 20 employees is that they appear to be too small to acquire the knowledge or experience necessary to engage in the exporting process. The good news for small firms with 20-100 employees is that they are not too small to access the export development process”.
However, the growing internationalisation of small enterprises and HBBs and advances in Information Communication Technologies (ICT) suggest that some HBBs may break the conventional wisdom of ‘size matters’ and access international markets.

Exporting is increasingly seen as an opportunity for corporate growth and increased profitability among small-to medium-sized firms in many industries (Namiki 1988). In particular, the potential markets that may be reached from home are increasing in number, particularly for firms that export from inception (Phillips 2002). While HBBs have received attention concerning their importance to local communities and employment generation, it should also be acknowledged that HBBs can also contribute to attracting export currencies (Gelderen, Sayers, & Keen 2008).

**Literature Review**

**What is a Home-Based Business?**

The term ‘home-based business’ generally refers to a business where most of the work of the business is carried out at the home of the operator or where the business has no other premises owned or rented other than the home of the operator. A HBB is different from a ‘home worker’ or ‘home labour’, which is someone who works for an employer in his or her home, or in other premises of his or her own choice, other than the workplace of the employer, and can be examined in Pearson (2004), amongst others.

Businesses operated in a home-based setting tend to be less visible than their counterparts located in commercial settings but are much more prevalent than might be first thought. Globally, HBBs are numerically a significant part of the economic landscape. In the USA, the world’s largest economy, approximately two-thirds of all small businesses, and about half of all businesses overall, are home-based (Beale 2004; Pratt 2000), and in the United Kingdom and Canada just under 10 percent of the population operate a HBB (Dwelly,
Maguire, & Truscott 2005; Federal Government of Canada 2002). In Australia, HBBs make up more than two-thirds of the small business population (ABS 2004). In the developing world, the importance of HBBs is even greater and numbers more predominant. For instance, approximately 15 percent of the households in Meuraxa, Aceh in Indonesia are both a workplace and a living space, typically involved in trade, production, services and coffee shops/small restaurants (ILO 2007). While in Laos, businesses operated by women tend to be mainly home-based (Enterprise Development Consultants. 2002).

**Small and Home-Based business Export Characteristics**

Past scholarship has focused on the firm characteristics useful for predicting export orientation and international performance. It has shown that small businesses differ significantly from large firms concerning export in the areas of export planning activity, organizational and attitudinal variables, and information-gathering activity (Samiee & Athanassiou 1998). Brouthers & Nakos (2005) investigated the importance of systematic international market selection. Their study suggested that older firms that altered their products prior to exporting them to foreign markets, companies depending on foreign markets for a large percentage of their sales and firms that concentrated in fewer foreign markets performed better internationally. They concluded that systematic international market selection appears to play a significant role in determining the success in international markets for small business and the use of a systematic methodology in selecting foreign export markets appears to play a role in export success (Brouthers & Nakos 2005). Araujo & Ornelas (2007) found that the probability that a firm will stop exporting decreases as its foreign sales increase with the export experience of the firm. The reason is that informational costs experienced by an exporter decrease as the exporter becomes more confident about the reliability of its distribution.
Rutihinda (2008) explored the factors influencing the internationalization of Canadian SMEs located in the Eastern Townships of Quebec and posited that four major factors explain the internationalization: owner manager’s international orientation, globalisation of the firm’s industry structure, established international networks, and foreign market potential. In his study successful firms were found to have owner managers with an international orientation and established international networks. Based on this finding Rutihinda (2008) concluded that a conducive domestic environment and an international orientation are important drivers of SME international success.

Julian (2003) found four factors contributing significantly to the variation in the export marketing performance of Thai export ventures: competition, commitment, export market characteristics, and product characteristics. The four variables together accounted for 29 percent of the variation in the Thai firms' export marketing performance. Firm-specific characteristics and export marketing strategy were found to have no effect on the Thai firms' export marketing performance.

Nassimbeni (2001) suggested that the propensity of small businesses to export is strictly linked to their ability to innovate the product and develop valid inter-organisational relations, and less related to manufacturing, quality control, management, design, communication, handling, storage technologies of the company.

Grondin & Grondin (1994) compared exporting and non-exporting female entrepreneurs regarding their information about export markets, their perceptions of the usefulness of export market information, and the helpfulness of government export stimulation programs. They identified formats women entrepreneurs believed to be most helpful in obtaining information about exporting their products and services. The results suggested that in New Brunswick, New Jersey, USA the majority of female entrepreneurs did not export their products and services. Furthermore, they did not plan to enter the export
market in the future. Their businesses were, for the most part, small, non-technology-based, labour-intensive, or cottage-craft industries. They were relatively new, with few employees, and had low annual sales revenues. However, they also had low overhead expenses and the owners had the freedom to coordinate their business activities around their family life and responsibilities. These findings suggest that, rather than export stimulation programs, the majority of female entrepreneurs in New Brunswick were more interested in and would benefit more from product or service quality programs (Grondin & Grondin 1994). While this is one of the few studies that have focused on export differences between males and females, more recent research has dispelled the conventional wisdom of women HBBs as non-expansionist (Breen, Paguio, & Bergin-Seers 2008).

Providing a breakdown of exporters amongst HBBs in the USA, Phillips (2002) reported that about three percent of HBBs (500,000) exported. Amongst this group, 11 percent of Black HBB owners, 21 percent of Hispanics, and 28 percent of Asians said they wanted to increase their exports, particularly within the wholesale trade sector, compared with six percent of women HBB owners. While, in Australia, a comparison of the number of employees in Australian small firms described as non-exporters found a difference in the mean number of employees between the two groups. According to size it was found that businesses with 1-4 employees were less likely to export than larger businesses, but as business size increased there was not a proportional increase in the probability of exporting (ABS 2010). The suggestion however, is not that HBBs and micro businesses do not export. In fact, a report from the Business Longitudinal Survey showed that over the three years, the number of exporting micro businesses (1-4 employees) increased from 5,500 in 1994-95 to 7,500 in 1997-98, representing an average increase of 11 percent per annum (ABS 2000).

Concerning e-commerce, characterised in terms of web presence, the same dataset showed that exporters were more likely to have a web presence (76 percent) than non
exporters (33 percent) (ABS 2010), supporting the thesis that ICT and e-commerce are a cross-national enabling medium that has become important for a range of small and home based businesses (Burgess, Sellitto, & Karanasios 2009; Moodley 2003; Phillips 2002; Walker 2003). Along these lines, performance of firms in international markets has been found to be better for those that have adopted more advanced e-business tools (Lal 2004).

Small Business Barriers to Export

Despite the globalized nature of business and the potential benefits, for many smaller-sized manufacturers gaining and maintaining access to export markets is problematic (Leonidou 2004). At the same time, some firms export in spite of barriers and firms who do not perceive barriers are not necessarily involved in export activity (Ramaseshan & Soutar 1996). Obstacles have been associated with internal weaknesses such as a lack of capital, while others relate to external factors such as customer habits and other market factors. Moreover, there are also problems that arise within the domestic environment such as a lack of government assistance and others that occur in the foreign market where the company operates or is planning to operate (Leonidou 2004). Leonidou (2004) further contends that in general, internal barriers found within the country base of the exporting firm are more controllable and are easier to manage, as opposed to external problems occurring abroad.

Leonidou’s (2004) analysis also revealed that the frequency, intensity, or importance of export barriers can vary according to different time, spatial, and industry contexts, suggesting that barriers to export are situation-specific, and dependent on a range of internal and external imperatives. However, he suggests that factors pertaining to information inefficiencies, price competitiveness, foreign customer habits, and politico-economic hurdles strongly influence the export behaviour of small business (Leonidou 2004). He also provides a number of recommendations in order to facilitate access to export markets, such as
increased government support, education on export markets and further research concerning barriers to export, managerial factors and the impact of export.

The cumulative literature presents a number of key themes 1) there are a number of barriers to export 2) that advances in ICT and globalisation are leading to the internationalisation of small business and conversely 3) that firm size is a predictor of exporting capability and export growth. However, this suggests that HBB are both operationally able and paradoxically restricted to reach export markets. This paradoxical position may be because few studies have focused on export in the context of HBBs. In order to expand knowledge on this important subgroup of small business we analyse data collected from a large sample of HBBs and investigate the characteristics of export orientated HBBs. In the next section we outline our study method and setting, we then present the findings from the data analysis and discuss the findings and their implications.

**The Study**

The results reported in this paper are part of an overarching study that examined the characteristics of HBBs in order to understand their growth, the motivations that led to home based self-employment, their export orientations and perceptions on operating a HBB. In order to achieve this, we developed a comprehensive questionnaire that focused on the dimensions of the HBB and used a range of non-comparative scale (Likert-type scale), pairwise comparison, and open-ended questions. A total of 7484 questionnaires were distributed, with 978 usable responses returned, representing a response rate of 13 percent.

To obtain this large sample with a broad range of HBBs, twenty Local Government Authorities and two support agencies across Metropolitan and Regional Victoria provided valuable assistance in the widespread online and mail distribution of the survey to their constituent HBBs. Victoria is Australia’s second most populous state, located in the south-eastern corner of Australia, with 5.4 millions inhabitants recorded in 2009 (ABS 2009).
obtain a statewide perspective, geographical dispersed councils were surveyed, limiting any bias from regional effects. The questionnaire design followed the process of a piloting and refinement phase in order to test its clarity, usability and responses. Data was analysed using SPSS, we relied predominantly on two forms of analysis, t-tests and cross-tabs, as suggested by McCrum-Gardner (2008).

**Results**

In total 9.6 percent of business were classified as export orientated, while the remainder were classed as domestic market orientated. Our classification was based on two criteria 1) the business indicated that they had overseas customers, and 2) they indicated that export sales were important to the business. This method of classification was selected to omit businesses that had narrow export frames of reference and allowed us to focus specifically on HBBs that were more ‘export orientated’.

Table 1 illustrates the industry breakdown of export and non-export orientated HBBs. The categories were condensed from a list of over thirty industries and computed into a manageable number. In observing the cell frequencies, it can be concluded that ‘Manufacturing’, ‘Accommodation and Food Services’, ‘Architectural, Scientific and Technical Services’ and ‘Other’ are the most common form of export oriented HBBs. While this shares some small resemblance with domestic market orientated HBBs, the domestic cohort were also heavily involved in ‘Construction’, ‘Management, Legal, Finance and Accounting Services’ and ‘Arts, Recreation and Other Services’.
Table 1: Industry breakdown of HBBs

<table>
<thead>
<tr>
<th>Industry Category</th>
<th>Export</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>17.9%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Construction, Construction Services</td>
<td>0%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Wholesale trade, Retail</td>
<td>8.9%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>16.1%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Architectural, Scientific and Technical Services</td>
<td>16.1%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Management, Legal, Finance and Accounting Services</td>
<td>12.5%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Administrative Services, Building Support Services</td>
<td>1.8%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Education and Training, Health Care, Childcare and Social Assistance</td>
<td>1.8%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Arts, Recreation and Other Services</td>
<td>10.7%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Other</td>
<td>14.3%</td>
<td>6.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

A cross tabulation analysis of business category and export or domestic market orientated business revealed significant association $\chi^2(9, N=810)=43.920, p < .05$, indicating that industry plays a significant role in export direction of a HBB.

We examined the characteristics of the HBBs in order to determine which characteristics of HBBs were associated with its export orientation. In particular we focus on the hypothesis:

**H1: The greater the number of employees the more likely the HBB is to export.**

Cross tabulations revealed significant difference between export and domestic firms and the number of employees $\chi^2(5, N=772)=14.505, p<.05$, with over half (51 percent) of export orientated HBBs having more than three employees, while only 30.9 percent of domestic orientated HBBs had more than three employees. Therefore, in accepting the hypothesis we contend that HBBs with three or more employees are more likely to export.

We also focused on other characteristics of the HBBs – namely, the rural versus metropolitan location, number of hours worked per week, primary source of income, years in operation, age of operator, whether it was a franchisee, whether it had a carefully prepared business plan and education of the owner. No significant difference existed between the groups, except for the education of the owner. The analysis revealed that export orientated
HBB owners had a higher level of education than non-exporting HBBs $\chi^2(2, N=804) = 9.999$, $p<.05$.

We examined the importance placed on using the Internet as a conduit for conducting business by export and non-export orientated firms. Specifically we formed the hypothesis:

**H2**: Export orientated firms are more likely to place emphasis on conducting business over the Internet.

Using an Independent Samples Test we found a significant difference between the two types of HBBs and the importance they placed on conducting business over the Internet $t(948)=-8.625$, $p <.05$, indicating that export orientated HBBs place more emphasis on conducting business over the Internet than non-exporting HBBs. Therefore, we accept the hypothesis.

In order to determine the propensity of export orientated HBBs to growth we formed the following hypothesis:

**H3**: Export orientated firms have a greater propensity towards growth.

Cross tabulations revealed significant difference between export and domestic orientated firms and their initial growth aspirations $\chi^2 (2, N=814) = 15.633$, $p<.05$, showing that export orientated firms indicated greater initial aspirations for growth.

Moreover, analysis revealed significant difference between export and domestic orientated firms and their future growth aspirations $\chi^2 (3, N=816) = 28.555$, $p<.05$, showing that export orientated firms indicated greater future aspirations for growth. We therefore accept the hypothesis.

Building on this, we investigated the ambition of export and non-export orientated HBBs to move to commercial premises in the future and found that export orientated HBBs indicated a higher aspiration to move to commercial premises $\chi^2 (1, N=810) = 8.884$, $p<.05$. 
**Discussion**

In our study, almost 10 percent of HBBs were classed as export orientated. This is a larger proportion than other HBB studies, for instance Phillips (2002) indicated that three percent of HBBs were exporters. However, our study did not control for factors such as irregular and regular export, which has the potential to influence the findings. For instance, in the Australian Bureau of Statistics Business Longitudinal Survey (conducted over a four year time span) only one third of small business that were classed as exporters actually exported in every of the four years. However, we did attempt to mitigate this concern by limiting our classification of export HBBs to those that had overseas customers and placed importance on exports.

We began by examining the industry breakdown of export and non-export orientated HBBs. In line with other studies that have found that a firm’s industry category was an important factor in the export orientation of the HBB (Julian 2003; Rutihinda 2008), we found that HBBs in certain industries were more likely to export. The highest-ranking export orientated HBBs were:

1. Manufacturing
2. Accommodation\(^1\) and Food Services
3. Architectural, Scientific and Technical Services
4. Other

Domestic market orientated HBBs differed in that they were also heavily involved in ‘Management, Legal, Finance and Accounting Services’, ‘Construction’ and ‘Arts, Recreation and Other Services’.

This study lends support to the literature that suggests that exporting businesses tend to have more employees (Mittelstaedt, et al. 2003). However, the range of employee numbers

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\(^1\) Accommodation is considered an export because it attracts foreign currencies
in our study is less than other small business studies – we found that HBBs with more than three employees were more likely to export. While this is because we only focused on HBBs, future studies however could investigate if this size threshold has been lowered in recent times due to the internationalisation of small business and the role of ICTs.

The literature suggests that firm characteristics, such as planning (Brouthers & Nakos 2005), are important in explaining the export direction of a firm. This paper explored the characteristics of exporting HBBs and compared export orientated HBBs with domestic market orientated HBBs concerning education, total number of employees, business plan, hours worked per week, primary source of income, years in operation, age of operator, and whether it was a franchisee. We found that the only significant difference existed between export and non-export orientated HBBs concerning education. That is, export orientated HBB owners had a higher level of education.

We tested the hypothesis that export orientated HBBs place more importance on conducting business over the Internet. The analysis unequivocally showed that export orientated HBBs place greater emphases on the Internet as a conduit for accessing foreign markets $t(948)=-8.625, p <.05$. This echoes the results of the Australian Bureau of Statistics (2010) study that showed exporters were more likely to have a web presence (76 percent) than non exporters (33 percent). Furthermore, it adds to the expansive body of literature that suggests ICT are enabling small businesses to access new markets (Burgess, et al. 2009).

Export orientated firms also indicated a greater aspiration for future growth and initial aspirations for growth from start-up. Furthermore, we found that export orientated firms are expansionist and desire to move to commercial premises. There is however little literature that links export orientation to growth aspirations to support this.

It is important to place some caution on the findings of this study. For instance, it should be noted that whilst Australia’s resources boom continues to bring in export income,
on the other hand the resulting strong dollar may see negative growth in the number of exporting HBBs (Outer Suburban/Interface Services and Development Committee. 2008). Nonetheless, this paper unequivocally suggests that HBBs are a significant player in the export market and should be considered as such and can contribute to the inflow of foreign currencies (Gelderen, et al. 2008). As underscored by a recent parliamentary inquiry on local economic development in Australia, while there has been some strategies to support small business reach export markets “more could be done to ensure businesses of all sizes and locations are fully informed of the potential export opportunities and the availability of government export assistance programs and grants” (Outer Suburban/Interface Services and Development Committee. 2008).

**Conclusion**

This paper adds to the body of literature concerning HBB and export markets. Whilst much of the literature has indicates that HBBs are less likely to export, this paper has shown that almost 10 percent of HBB are export orientated. We found that exporting HBBs are likely to have more than three employees, place greater emphasis on conducting business over the Internet and have greater initial and future aspirations for growth. This research helps to highlight the characteristics of an under-researched HBB sector according to those involved in export. This analysis will help to provide a better understanding of the drivers of export activity. The findings will provide information for support services and policy makers to enable them to offer focused support to HBB operators interested in increasing the level of their exports. Building on this research, future studies could examine in greater detail the managerial and firm characteristics of exporting HBBs. Beyond this, instructive lines of inquiry include the examination of income from revenue amongst export and non-export HBBs, deeper investigation of the industry and products and services exported, and the role of ICT in facilitating access to export markets.
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Stan Karanasios is a researcher at the Centre for Tourism and Services Research (CTSR) at Victoria University, Australia, where he completed his PhD on small business ICT adoption in 2008. He is also currently a Visiting Research Fellow at the University of Leeds in the United Kingdom.

References


Three Circles’ Overlap and Research on Feiyang College

Entrepreneurial Strategy Effects

(Essay on the Fiftieth ICSB Global Annual Conference)

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Qing Yu (Secretary of Feiyang College /MBA)

Abstract

The overlap area of the three circles is the strategy of the organization, the overlapped desirable prospect circle of Feiyang College is entrepreneurship, the overlapped opportunity circle is entrepreneurship, and the overlapped strength circle is entrepreneurship.

According to the strategic choice and the three circles’ overlap theories, Feiyang College has determined the future strategy -- Entrepreneurship-Learning Entrepreneurship in 2009. The entrepreneurial strategy effects depend on the overlap area of the three circles; while the latter depends on the effective degree of various elements of the three circles.

Feiyang is exploring the entrepreneurial strategy in which the central points and three circles are enlarged synchronously.

Key words: Three Circles’ Overlap, Overlap Area, Strategic Effects
1. Summary

During the new development period of world economy and the post-financial crisis period in 2010, Chinese government takes positive measures and proposes the strategic decision to create an innovative country, entrepreneurial society and entrepreneurial talents, which transforms Chinese economic development mode from extensive to intensive and technology-intensive economy. The simple labor force is increasingly in inconformity of the social needs. Therefore the rapid cultivation of a great number of entrepreneurial, innovative and hard-working talents who can adapt to the transformation of economic development mode provides a good opportunity for Feiyang College’s choice of strategy.

Feiyang College’s desirable target is to build the cradle of entrepreneurs; Feiyang College has had ten thousand students in five years; among the 30 thousand Feiyang graduates in the past ten years, half of them have been engaged in either self-entrepreneurship, corporate entrepreneurship or social entrepreneurship.

Therefore, according to the principle of modern strategic choice: the overlapped public area of organization’s desirable prospect + exterior opportunities+ interior strength is the future strategy; the desirable prospect of Feiyang College: aiming to cultivate entrepreneurs, the opportunity: the country needs a great number of entrepreneurial talents, the strength: the college has cultivated over ten thousand excellent entrepreneurial talents, and the overlapped public area element of the three is “entrepreneurship”; therefore the strategic choice of Feiyang College is to build the most influential entrepreneurial college with the core of “learning by doing in entrepreneurship”.

As for the above strategic choice and effects, we apply mathematic model: the size of the
overlap area of the desirable prospect circle, the opportunity circle and the strength circle, to make research and analysis on the strategic effects of Feiyang “entrepreneurship”.

2. The Mathematic Analysis on Three Circles’ Overlap Area

In an ichnography, the three circles are positioned by their different center points and overlapped by different areas. The changing discipline of the overlap area is as follows:

1) The utmost limit situation of the three circles’ overlap:
   
   i. There is no overlap area for the three circles;

   ii. The overlap area is equal to the area of the smallest circle when the center points of three circles are overlapped.

2) The general situation of the three circles’ overlap:

   The center points of the three circles are positioned in the three vertexes of a triangle and the three circles are in a respectively initial size.

3) The changing situation of the three circles’ overlap:

   When the distance between the central points of three circles remains invariant:

   i. If the size of three circles doesn’t change, the overlap area doesn’t change;

   ii. If one circle becomes bigger and the other two don’t change, then the overlap area becomes bigger(there are three situations);

   iii. If one circle becomes bigger and the second becomes less bigger contrasting with the first one and the third becomes smaller, then the overlap area becomes bigger (there are 6 situations);

   iv. If two of them become bigger and the other one doesn’t change, the overlap area
becomes bigger (there are 3 situations);

v. If the three all become bigger synchronously, the overlap area becomes bigger.

There are altogether 14 situations for the above mentioned changing discipline. Supposing the distance between the three circles changes, and then it will have another seven situations. As a result, with the changes of the center position and the circle areas, there will be 112 changes for the regular overlap areas. Therefore, we can enlarge the overlap areas by means of changing the relative center position or the areas of circles.

3. The Foundation for the Strategic Choice of Three Circles’ Overlap

1) The Theory of Three Circles’ Overlap

The three circles’ overlap area is the personal and organizational strategy, and the overlap area represents the implementation effects of the personal and organizational strategy. The larger the overlap area is, the better effects are achieved. The central points of the three circles shall be much closer or the area of three circles shall be enlarged in order to increase the overlap area. The core content is: (1) The size of the circle is relevant to the number of elements in the circle. (2) The changes of some elements can make the circles bigger, some can make the circles smaller, some can make the distance between the central points closer, and some will make the distance between the central points farther. (3) The worst situation is that the distance between the central points becomes farther, the circle becomes smaller, and the circles have no overlap area, which indicates that it will retreat from the historical stage, such as the “pager”. (4) The distance between the central points, the size of circle and the overlap area all remain unchanged, and this situation is strategic fantasy. (5) The optimal situation is that the central points of the three circles
overlap, the three circles become bigger at the same time, and the overlap area reaches the maximum, while this situation is just ideal, and can hardly be realized. (6) There are 112 kinds of regular changes between the fantasy condition and the optimal condition, and these changes depend on the changes in various elements and the effective degree of the elements. The overlap area is between the strategic fantasy and optimal condition without regular changes. The basic model of the changes is as follows:

2) Strategic Effect Diagram

Desirable Prospect

Opportunity

Strategy

Strength

1-5 years

The center position unchanged

The circle areas unchanged

The overlap area unchanged

Strategic effective area unchanged

1 year to

Strategy fantasy
The three circles are close to concentric
The three circles become bigger at the same time

The overlap area reaches the maximum

Many years

The changes of the center position and the circle area cause 112 changes to the overlap area

The optimum situation for strategy implementation

3) The analysis on the changes of center points distances, the circle area and the overlap area of the three circles

i. The distances between the center points represent:

a) When the strength gets close to the desirable prospect: it proves that the effect of entrepreneur training is good;
b) When the desirable prospect gets close to the opportunities: it proves the entrepreneurs make full use of the opportunities;

c) When the opportunities gets close to the strength: it proves that the whole society recognizes the entrepreneurs need to be trained by universities;

d) When the strength gets close to the opportunities: it proves that building the cradle of entrepreneurs is recognized and supported by the society;

e) When the opportunities gets close to the desirable prospect: it proves that circumstances are suitable for development of the entrepreneurs;

f) When the desirable prospect gets close to the strength, it proves that the entrepreneurial training is very important.

ii. The circle area represents:

a) The distance from the realization of desirable prospect;

b) The probability of grasping the opportunities;

c) The level of full display of strength.

iii. The overlap area represents:

a) When the area remains unchanged: the strategic effect remains unchanged, the strategy turns out to be a fantasy;

b) When the area becomes a little bigger, the strategic effect improves, but it is not a fantasy, or not enough in level;

c) When the area increases to a certain level: the effect and the strategic ideal are good;

d) When the area changes greatly, the effect is obvious and the strategy turns out to
be ideal;

c) When the three circles become bigger and overlap: the strategy turns out to be the optimum situation.

4. Feiyang College Entrepreneurship Strategic Effect Design

1) The Model of Feiyang College’ Strategic Choice

The effect of entrepreneurship implement in Feiyang College
The three circles are close to concentric
The three circles become bigger at the same time
The overlap area reaches the maximum
All the elements contribute to closer center points and bigger circle areas.

Feiyang aims to be the most influential entrepreneurial college in China within 5 years and one of the most influential colleges in the world within 10 years.

Transform from manpower resource strong country to talent resource strong country

Tens of thousands of entrepreneurs

Optimum situation for the target implementation
2) Feiyang College Entrepreneurial Value Chain Model

In 2009, our college established the first Entrepreneurship Management School, and applied for the Entrepreneurship Management and Innovation Management directions. With the approval of the Ministry of Education, in 2010 our college can recruit students, and make the entrepreneurial subjects the public course, so every student will be able to make progress in the three cultivation modules, Entrepreneurial Mind, Entrepreneurial Capability and Entrepreneurial Practice. Every student can participate in the entrepreneurship incubation projects, which actually realize the strategy of “Learning by doing in Entrepreneurship”. In order to realize better implementation effects, our college has designed the feasible entrepreneurial value chain in which various elements complement each other.

<table>
<thead>
<tr>
<th>Entrepreneurial forum:</th>
<th>promote the sharing of industry, study and research of entrepreneurship</th>
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</thead>
<tbody>
<tr>
<td>Entrepreneurial contest:</td>
<td>select the students with entrepreneurial potential</td>
</tr>
<tr>
<td>Entrepreneurial teacher:</td>
<td>cultivate entrepreneurial talents</td>
</tr>
<tr>
<td>Entrepreneurial website:</td>
<td>the platform for the exchange of entrepreneurial information</td>
</tr>
<tr>
<td>Entrepreneurial tutor:</td>
<td>lead the entrepreneurial incubation projects</td>
</tr>
<tr>
<td>Entrepreneurial incubation:</td>
<td>improve practical ability of entrepreneurship, scale production and promotion of incubation results</td>
</tr>
</tbody>
</table>

Entrepreneurial Value
Entrepreneurial funds: the propellant of entrepreneurship

Entrepreneurial originality: create inspiration

Entrepreneurial opportunity: the recognition and grasp of the opportunities

Entrepreneurial culture: build entrepreneurial atmosphere

Entrepreneurial media: publicize entrepreneurial concepts

Entrepreneurial magazine: promote the exchange among entrepreneurial activities

<table>
<thead>
<tr>
<th>Recruit resource</th>
<th>Teaching resource</th>
<th>Incubation Projects</th>
<th>Employment Self-entrepreneurship</th>
<th>Business Six aspects</th>
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<tr>
<td>Contest Subject</td>
<td>Research Results</td>
<td>Scale</td>
<td>Enterprise entrepreneurship</td>
<td>Social entrepreneurship</td>
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<td>Potential Effects</td>
<td>Scale</td>
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Feiyang College Entrepreneurial Value Chain Model

5. *Feiyang College Entrepreneurial Strategy Implementation*

1) Recent Effects

   i. Providing platform for the entrepreneurs

   Under the influence of eastern traditional culture, politicians, bosses and students of famous universities, etc are favored by the public, but only a few people can make it. Then how should more university graduates choose after graduation? At present our country is advocating the realization of innovative country, entrepreneurial society and entrepreneurial talents, and has determined 80 cities as the first entrepreneurship pilot cities, in order to
promote the employment with entrepreneurship to solve the employment of a great number of university graduates, and help the people aspiring after entrepreneurship realize their own life value. After the exploration over so many years, our college is the first to systematically put forward the concept, classification, function, standard and system of entrepreneurship. We has established the largest entrepreneurship incubation center, invited many entrepreneurial experts and tutors, achieved outstanding results in the entrepreneurial education and provided a platform for the students and the social entrepreneurs.

ii. The global forum creates ten bests

On Nov 23, 2009, our college successfully held the “Lu Ban Entrepreneurship” Global Forum, which created the ten bests in Chinese entrepreneurial forums.

(a) The largest scale—about 1,000 people attended the forum. (b) Invited 100 most influential entrepreneurial experts and tutors all over the world. (c) The most levels--- the attendees included famous entrepreneurial experts at home and abroad, famous presidents of foreign universities, entrepreneurs from home and abroad, civil servants, entrepreneurial students, entrepreneurs, high-school principal, news media, etc. (d) The highest level—the president of Entrepreneurship Association of Global Medium and Small Sized Enterprises Ma Xiu came to China and addressed keynote speech for the first time; the president of Alaska University of the Pacific Professor Douglas Mackaye
North addressed the keynote speech titled “Entrepreneurial Incubation and Entrepreneurial Talents”; famous entrepreneurial marketing expert of Guanghua School of Management of Peking University Professor Wang Jianguo addressed the keynote speech of “Entrepreneurial Marketing”. (e) The first in China to propose scientific entrepreneurial concept, which overthrows the traditional narrow recognition of entrepreneurship. (f) The first to put forward the complete curriculum system for entrepreneurial talent cultivation. (g) Put forward the importance of the industry, study and research of entrepreneurship and the building of entrepreneurial value chain. (h) Over 100 enterprises have established entrepreneurial achievements alliance to realize large-scale production and promotion of incubation results. (i) Created various elements of the entrepreneurial value chain openly and effectively. (j) The first to propose the theoretical system -- The First Entrepreneurship to Lay the Foundation; the Second Entrepreneurship to Enhance the Career; Several Entrepreneurships to Pursue Excellence; Sustainable Entrepreneurship to Realize Evergreen Foundation.

iii. The entrepreneurship incubation center created five bests

a) The largest construction area—over 50,000 m2, the largest entrepreneurship incubation center in China.

b) It can accommodate the most incubation projects at the same time—the incubation center can incubate over 500 projects at the same time.

c) Most extensive people participating in the project incubation—the
incubation center has the construction area of over 50,000 m2, so over 10,000 people can participate in the project incubation at the same times.

d) It can realize the most large-scale production and promotion of the incubation results—100 enterprises have entered the incubation club to realize the large-scale production and promotion of the incubation results.

e) It invited the most tutors—100 entrepreneurial tutors become the members of the “Entrepreneurial Alliance” of the college.

The entrepreneurship incubation center can solve many problems related to the entrepreneurial system project for the all circles of the society who aspire for entrepreneurship, and meanwhile provide a good platform for the students to improve their entrepreneurial accomplishment and practice the entrepreneurial skills.

iv. The entrepreneurial funds approach ten million Yuan

The entrepreneurial funds can provide financial support and guarantee the success for the entrepreneurs. Feiyang Global Entrepreneurship Center has attracted the first entrepreneurship incubation fund of nearly ten million Yuan since the establishment.

v. The establishment of Entrepreneurship Management School

In order to build the entrepreneurial education brand major and cultivate a great number of entrepreneurial talents and entrepreneurial management staff, the college has established Entrepreneurship Management School and applied
for the Entrepreneurship Management and Innovation Management directions.

It is the only approved entrepreneurship management major among the similar colleges in Shandong.

vi. Put forward complete entrepreneurial curriculum system for the first time

The college puts forward complete entrepreneurial curriculum system for the first time, the entrepreneurial public courses include: Extensive Moralities, Marketing, Entrepreneurial Management, Strategic Management, Qualifications of Entrepreneurs, Employment Education, etc, which has outstanding effects for the cultivation of entrepreneurial talents and realizes the national reproduction and scale promotion of the entrepreneurial curriculum system of our college.

vii. Social Value

Chinese entrepreneurial education is far behind the social economic development, the social sustainable development and low-carbon society badly need entrepreneurial talents. Chinese education lacks leaders and leading colleges. The college successfully held the entrepreneurship forum, which promoted the entrepreneurial consciousness of Chinese people. The permeation of the entrepreneurial concept will inspire the entrepreneurial passion of Chinese people, activate the entrepreneurial minds, and enrich the entrepreneurial knowledge. More university graduates have become wealthy through entrepreneurship, which realizes the actual stimulation of employment through entrepreneurship.
2) Expected Effects

i. Over one thousand entrepreneurial members

In order to promote nationwide entrepreneurial education, our college prepares to establish 32 offices in various autonomous regions, municipalities and provinces, with the responsibility to develop reserve members, promote entrepreneurial career and realize over 1,000 members of Entrepreneurship Association of Global Medium and Small Sized Enterprises China Branch.

ii. The entrepreneurial incubation students account for 80%

After the systematic study of entrepreneurial theories, among nearly ten thousand students of Feiyang College, most students have fostered great interest in entrepreneurship. After the completion of entrepreneurship incubation center, they will plunge into the incubation practice of entrepreneurial projects, and tens of thousands of people will participate in the incubation of entrepreneurial projects in future to become the backbone of the entrepreneurial project incubation staff. Our college strives to make 80% students participate in the entrepreneurship incubation within five years.

iii. The self-entrepreneurship accounts for 30%

According to the initial analysis of the employment situation of the previous graduates of our college, the self-entrepreneurship students account for over 5% of graduates of every year, and after our college established the Entrepreneurship Management School and Entrepreneurship Management and Innovation Management directions, we recruit a great number of students
who are eager for entrepreneurship to study the relevant entrepreneurial theories systematically, and meanwhile other majors except the aforesaid will also have curriculum of the basic theories of entrepreneurial education. Therefore we have laid the entrepreneurship basis for the students with professional skills and are eager for entrepreneurship, and the establishment of Feiyang Global Entrepreneurship Center provides a good platform for the entrepreneurial practice and practical ability, and we strive to have 30% self-entrepreneurship students within five years.

iv. 500 entrepreneurial tutors

The extensive promotion of the entrepreneurial education shall be backed by powerful teacher resources. We have invited 100 most influential entrepreneurial tutors all over the world, and planned to establish 32 offices of Entrepreneurship Association of Global Medium and Small Sized Enterprises China Branch. Meanwhile the promotion of entrepreneurial education among our students and the social persons who aspire for entrepreneurship shall be completed by a great number of entrepreneurial tutors; therefore we strive to invite another 500 entrepreneurial tutors within five years.

v. 500 entrepreneurial experts

Our college has become the Preparatory Committee president unit of Entrepreneurship Association of Global Medium and Small Sized Enterprises China Branch, and our broad director Lu Feicheng has become the first Preparatory Committee president of China Branch. In order to continue with
the promotion of entrepreneurial education all over the country, Preparatory Meeting of Entrepreneurship Association of Global Medium and Small Sized Enterprises China Branch will be held in Qingdao People’s Government Conference Center from April 9-11, 2010; the reserve entrepreneur members who aspire for entrepreneurship or succeed in entrepreneurship will be absorbed through China Branch offices in various autonomous regions, municipalities and provinces. In order to better guide and development relevant entrepreneurial work, our college will invite another 500 entrepreneurial experts within five years.

vi. The entrepreneurial funds exceed 0.1 billion

Judging from the experience of entrepreneurs, it is hard for many entrepreneurs to obtain initial capital. In order to support the students who are eager for entrepreneurship, our college has specially established entrepreneurial funds to solve the initial capital for the students. Meanwhile in order to promote and develop entrepreneurial career nationwide, and provide financial support for the social people who aspire for entrepreneurship, our college has specially established entrepreneurial funds. Our college has attracted a batch of entrepreneurial incubation funds immediately after successfully held the first “Lu Ban Entrepreneurship Global Forum and established Feiyang Global Entrepreneurship Center; with the establishment of ICSB China Branch offices in autonomous regions, municipalities and provinces to promote the entrepreneurial career, more entrepreneurial funds
will be attracted and it is predicted that the entrepreneurial funds will exceed 0.1 billion within five years.

vii. The entrepreneurial incubation results exceed one thousand

After our college successfully held the first global forum, 100 enterprises have entered the entrepreneurial incubation club to realize the scale production and promotion of incubation results. They will bring the problems and imaginations of the enterprise to Feiyang College for the incubation research by the students and teachers. Meanwhile the successful incubation projects will return to these enterprises to realize large-scale production, which is also the practice of “Industry, Study and Research of Entrepreneurship” proposed by Feiyang. With the large-scale nationwide promotion of the entrepreneurial career, more entrepreneurial experts and tutors will participate in the Feiyang entrepreneurial family, a great number of entrepreneurial incubation projects will enter Feiyang Global Entrepreneurship Center, and the entrepreneurial incubation results will exceed one thousand within five years.

viii. Entrepreneurial value

At present our country is advocating the creation of innovative country, entrepreneurial society and talents, determines 80 cities as the first entrepreneurial pilot cities to promote the employment through entrepreneurship and solve the employment of a great number of university graduates, which is one of the reflection of entrepreneurial value. According to the latest international entrepreneurial theories, the entrepreneurial value is
mainly reflected that the entrepreneurship will create new opportunities, new employment vacancies and new social wealth, and promote social harmony, which is the tenor of our endeavor to create the entrepreneurial education.

6. Conclusion

The practice proves that: the overlap area of the three circles is in direct proportion to the effects of entrepreneurship strategy. If the overlap area of the three circles has no enlargement or decrease, the strategy will become a fantasy; when the three circles enlarge and the center points overlap synonymously, the target effect will be optimum; there are 112 regular changes between the two. Studying the overlap area of the three circles can help us predict the element changes in each circle and guide the strategic effect changes, which is of great significance to the society.

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University Press.


The Social and Environment Responsibility In Indonesia SMEs Potrait

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ABSTRACT
Recently CSR has been taking its momentum among the business society in Indonesia. The economic crisis and reformation era have brought up a new spirit of transparency, democracy, and social awareness. Initiated by multinational companies and CSR Forum, now, more and more companies operating in Indonesia are adopting CSR because they believe it is the right thing to do. However, its implementation is not always easy due to some external factors affecting business, especially in SMEs. This paper attempts to provide general analysis as a portrait of CSR implementation in Indonesia SMEs related to business environment, as well as how the owners of SMEs disclose their perception of CSR theme or topic and build good internal values to address such business challenges, e.g. product & service, labor, environment, etc. Based on the authors' observations in the last few years, and surveys conducted to 185 SMEs membered at IBL.

Keywords: environment responsibility, social responsibility, small medium enterprises,
Entrepreneurial Origin and the Configuration of Innovation in Rural Areas:

The Case of Cumbria, North West England

Christos Kalantaridis* and Zografia Bika**

Abstract
This paper examines the incidence of innovation and the configuration of innovation systems in rural areas. Drawing on the results of a micro-level study in Cumbria, the paper shows that the actor-constructed regional innovation system stretches well beyond the confines of the locality. This can be explained – in large part – on account of entrepreneurial origin. New arrivals (especially immigrants) demonstrate the greatest propensity to innovate using innovation systems that cut across regional and national boundaries. Interestingly, returnees also demonstrate a high propensity to innovate relying heavily in the regional context, whilst locally-born entrepreneurs report low incidence of innovation. The paper concludes offering a distinction between regional innovation systems (as macro-level analytical units with a normative dimension) and actor-constructed regional innovation systems (as micro-level descriptive units). This divide allows for the introduction of entrepreneurial agency in innovation studies.

Introduction

Since the 1950s the population of rural areas in the US (Berry, 1976), continental Europe (Dahms and McComb, 1999; Panebianco and Kiehl, 2003) and the UK (Agarwal et al, 2004; Bosworth, 2006; Champion and Shepherd, 2006) begun to grow as a result of urban-rural migration. The ability of rural localities to attract migrants has significant implications upon their enterprise, and consequently economic development trajectories. This is because the new arrivals are relatively

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affluent individuals (Shucksmith, 2001) equipped with networks of contacts formed over many years in different regional, or spatial, settings. Resources and information enable migrants to make a disproportionately positive contribution in the creation of new ventures in rural areas not only in the UK (Keeble, 1992; North and Smallbone, 2002; Kalantaridis and Bika, 2006), but also in continental Europe (Skuras et al, 2005; Kalantaridis, 2005; Stone and Stubbs, 2007) as well as in the US and Canada (Weber, 2006; Siemens, 2007). More importantly however, the contribution of migrants extends beyond numbers: they are often perceived as a means of strengthening the linkages of rural areas with the global economy (Raley and Moxey, 2000; Kalantaridis and Bika, 2006a).

Whilst there is a growing body of evidence regarding the impact of new arrivals on the incidence of entrepreneurship in rural areas, there is precious little research on their contribution to innovation and the configuration of innovation systems. This is despite the fact that there is a growing recognition of the importance of access to innovation inputs and a knowledge infrastructure (or the knowledge generating subsystem as commonly identified in the literature) in underpinning innovative activity within regional innovation systems (Cooke et al, 1997), as well as intra-regional innovation linkages (Howells, 2005). The latter are particularly important for rural areas, as they are often perceived disadvantaged (in comparison to metropolitan centres) in terms of their resource endowments and knowledge infrastructure.

Within this context, this paper sets out to explore the impact of migration on the incidence of innovation, as well as the configuration of innovation systems in rural areas. In doing so, the paper deploys a micro-level methodology that focuses on systems as viewed from the point of view of innovative firms: i.e. actor-constructed
regional innovation systems. In exploring the role of new arrivals, a distinction will be drawn upon patterns of population inflows and more specifically between in-migrants (defined here as those born elsewhere in the UK, moving to rural areas), immigrants (born abroad, moving to rural areas from elsewhere in the country or from overseas) and return-migrants (locally born inhabitant who lived and worked elsewhere – in the UK and/or internationally - but subsequently returned to the area of his/her origin). Given the broad conceptualisation of new arrivals, the paper utilises insights from studies examining international as well as domestic population mobility. Empirically the data used here are derived from a survey of one hundred innovative entrepreneurs in rural Cumbria (the term is used to denote the synonymous county excluding the urban centres of Barrow-in-Furness and Carlisle).

The evidence presented here shows that there are differences in the propensity to innovate by entrepreneurial origin, in rural Cumbria. It is immigrant and returnee entrepreneurs who record the greatest incidence of innovative activities. However, the configuration of innovation systems differs significantly in these two groupings. The former rely heavily on sources of innovative inputs and markets located elsewhere, and particularly beyond the national boundaries. The latter, in sharp contrast, emerge as the grouping that relies most heavily on localised innovation systems. These indicate the adoption of profoundly different strategies regarding the specificities of rural areas. Returnees appear to opt for strategies of adaptation, whereby need is defined within the parameters of existing resources, whereas immigrants demonstrate a propensity to break-out.

The paper is organised as follows: the next Section undertakes a purposeful review of the literature that leads to i) the development of a micro-level view of actor-constructed regional innovation systems, and ii) the development of a number of
research questions, whilst a detailed discussion of the methods used to collect and decipher the data is presented in Section three. Then the paper presents an overview of the case study area, and innovation in this setting. Lastly, there are some conclusions of the main findings.

The Literature

Regional Innovation Systems

Since the early 1990s, systemic approaches of innovation have dominated the debate on the interface between innovation studies and regional science (Cooke et al, 1997). This is partly because of the acknowledgement that innovations are carried out not within individual firms but a network of actors who are institutionally embedded (Edquist, 1997), and partly due to the growing realisation of the importance of proximity (both geographic and relational) for the promotion of innovativeness in enterprises (Asheim, 2007). Innovation systems can function at different scales, including regional, spatial, national and international ones (Sternberg and Muller, 2005). Within this context, particular emphasis was placed on innovation systems within the regional scale.

The importance of the region as a setting for innovation systems is on account of three reasons. Firstly, innovative activity is not distributed evenly across space, but is concentrated in certain regions whilst being more or less absent in others (Fritsch and Stephan, 2005). Secondly, the region constitutes an arena of economic interaction, that occurs within a specific institutional, political and social context (Storper, 1997). Lastly, partly due to specificities of context, a set of rules, conventions and norms that influence behavioural roles may occur within a regional setting. As a result, the concept of the regional innovation system has emerged as
central to the debate. Cooke et al (1998) define this as a system in which firms and other organizations are engaged in interactive learning, and these learning processes take place through an institutional milieu characterized by embeddedness. Therefore, it consists of a production structure (which comprise of techno-economic elements) and an institutional infrastructure (involving politico-institutional components) (Asheim and Isaksen, 1997). Exponents of this concept view it primarily as an analytical construct used in order to understand system dynamics and performance. This suggests that ‘the system in focus does not have to exist in reality as fully fledged’ (Berger et al, 2008, 408).

This view of regional innovation systems is manifested in the prevalence of top-down approaches in the operationalisation of the concept. The bulk of this literature draws upon key informant interviews and secondary data with the aim of capturing innovation systems as analytical units rather than as arenas of interaction between actors (MacKinnon et al, 2002; Doloreux and Parto, 2005). Thus, the emphasis is placed on the presence (or not) and mapping out of the regional production subsystem and the knowledge generation subsystem (as defined by Asheim (2007)) rather than actual interaction between the two. This operationalisation, would provide an accurate description of the regional innovation system under consideration only in a situation where the system is closed: i.e. the regional production subsystem taps exclusively into the regional knowledge generation subsystem, and the latter is not linked with other (outside the region) production subsystems. However, it is increasingly acknowledged in the literature that accessing knowledge from outside is of considerable importance for innovation (Boschma and ter Wal, 2007).
The conceptualisation and operationalisation of the regional innovation system has led to some confusion regarding the existence or not of a normative dimension. In large parts of the theoretical literature this concept is used to capture an ideal-type contextual setting for the advancement of innovative activities. Thus, Cooke and Morgan (1998) argue that a strict reading of the literature shows that only three regions are true regional innovation systems: namely the Silicon Valley, Emilia Romagna and Baden-Württemberg. Similarly, Asheim suggests that a regional innovation system ‘is in place when the following two sub-systems of actors are systematically engaged in interactive learning … first, the regional production structure of knowledge exploitation subsystem, which consists mainly of firms … second, the … knowledge generation subsystem which consists of public and private research laboratories, universities and colleges, technology transfer agencies and vocational training organizations’ (Asheim, 2007, 229). This led to the emergence of ‘system failure’ that captures instances when the system fails to develop or does so in a stunted fashion (Carlsson and Jacobson, 1997). This can only be captured in comparison to an ideal-type process of system development (developed in some detail by Bergek et al (2008)). However, the use of the concept in empirical studies is not value-laden: capturing a broad range of contexts with profoundly different innovative performance: from Austria (Gerstlberger, 2004) to China (Li, 2009) as well as cross-border regional innovation systems (Moodyson et al, 2008).

In response, this paper introduces a distinction between the regional innovation system (an analytical unit, captured through macro-level methodologies, and possessing a normative dimension) and a different – and complementary – concept: the actor-constructed regional innovation system. This divide can not only
provide clarity and eliminate confusion, but can also open new and productive lines of scholarly inquiry (discussed in the concluding Section of the paper).

The point of departure for the development of the new concept is the pioneering definition advanced by Lundvall: whereby an innovation system is ‘constituted by elements and relationships which interact in the production, diffusion and use of new, economically useful, knowledge’ (Lundvall, 1992, p. 2). Elements may include individual actors as well as a host of private and public organisations (which could be grouped into regional production and knowledge generation subsystems), whilst relationships are defined as ‘mutually oriented interaction between two reciprocally committed parties’ (Håkansson and Snehota 1995, 39). Of course relationships do not take place in a vacuum but occur within an established institutional context. Institutions, defined here as the multitude of formal and informal rules that govern the game, are thus, central to the innovation system. The advantage involved in innovation systems is that interaction of these elements produces pervasive and systemic effects that encourage enterprises (operating within the system) to develop forms of capital, and interactions that enhance their innovative capabilities (Doloreux and Parto, 2005).

This conceptualisation differs from that prevailing in the literature in three ways. Firstly, it aims to describe reality rather than provide an abstract analytical unit. Therefore, tracing actual relationships between actors is a key consideration. Secondly, in operationalising this concept a different methodological approach (from that adopted in the regional innovation systems literature) is adopted. This is a bottom-up approach that can utilise surveys, case studies and ethnographic research in order to trace existing relationships between actors and map-out the configuration of the system. Interestingly approaches like that are present in the literature (for
example Belussi et al, 2010). Lastly, partly as a result of the first point, it does not involve a normative dimension. Thus, all regions – irrespective of their innovative performance – have some kind of innovation system.

*The Implications of Rurality*

The conceptualisation of rurality in advanced market economies is increasingly problematic. This is because, following a long-term process of structural transformation, agriculture does not constitute the main economic driver of rural areas (Hodge, 1997; MAFF, 2001). This led to a new way of seeing rurality as a structural, symbolic, discursive or power terrain with wider socio-economic and ideological demands of consumption imposed onto it, no longer a neutral point of production. Rurality has thus been discussed either as a social representation (Halfacree, 1993), a territorial dimension (rather than geographical) of the countryside (Marsden et al., 1993), or a multi-functionality policy imperative (Potter and Burney, 2002). For the purposes of this paper rurality is defined as a spatial category dominated by large open spaces and, relative to the national context, small settlements. This conceptualisation of rurality has significant territorial implications for the knowledge generation subsystem, and by implication the prevailing innovation system. One outcome of low population densities upon the markets for factors of production is an increase in per unit costs of creating a local knowledge infrastructure. As a result, rural areas invariably lack higher education provision locally, as well as sizeable (private or public) R & D provision. This may create difficulties to entrepreneurial economic agents that rely exclusively upon local innovation inputs (Keeble and Vaessen, 1994). Moreover, the absolute number of enterprises present in most rural settlements is small, and often spread across a number of diverse industrial
sectors, limiting the scope for interaction as part of a local innovation system (Kalantaridis and Bika, 2006a). As far as output markets are concerned, market potential, which denotes the volume of goods sold per unit of landmass, is low. Thus, dynamic ventures may soon outgrow the confines of the local market and may be forced to expand nationally (Smallbone et al, 1999). This leads to the development of the first research question of the paper:

*RQ1: To what extent does reliance on elements (of an innovation system) that are rural based act as a constraint in the propensity of entrepreneurs to innovate?*

However, the territorial implications of rural space on the knowledge generating subsystem may or may not impact on the incidence or intensity of innovation. This can be partly explained because rural enterprises may be able to adapt to existing resources or broaden the geographical scope of the innovation system. Within this context, the potential role of migrants is instrumental.

*Population Mobility and Innovation*

During the past few years, there has been growing interest on the impact (actual or potential) of immigration on innovation. There are three reasons that underpin this body of research. Firstly, new arrivals – simply on account of their numerical significance - generate increased demand for goods and services in the country of destination. This, in turn, advances economic activity and fuels innovation. Secondly, immigration changes the human capital stock in the country of destination, by bringing in new skills, knowledge and ideas. Moreover, significant numbers of immigrants invest heavily in higher education. Thirdly, there is widespread
acknowledgement of the fact that new arrivals are not randomly selected samples of the population of countries of origin, but actually include their most dynamic and entrepreneurial elements (Borjas, 2006). Thus, they are more likely to engage in innovative pursuits and facilitate linkages between innovation systems in their places of origin and destination. This underpins the second research question of the paper:

*RQ2: Does the configuration of innovation systems differ by entrepreneurial origin?*

As a consequence, there has been considerable growth in that body of evidence examining the relationship between the inflow of new arrivals and its impact on the incidence of innovation. Most of these studies examine the impact of the immigrant human capital (i.e. the second reason identified in the preceding paragraph). More specifically, Peri (2007) shows that skilled migration increases patenting in the US – a thesis also supported by Maskus and Matt (2004). More recently, and in the same national context, Hunt (2008) shows that skilled immigrants innovate more than their native counterparts. This is particularly the case if the new arrivals are scientists or engineers. She goes on to seek an explanation of these findings in the higher education of immigrants within skill categories, and/or positive selection of immigrants in terms of their ability to innovate. In a European Union context, Nijkamp (2009) concludes that there is a positive relationship between the number of immigrants and innovation (measured in terms of patent applications). However, he goes on to suggest that it is particular groups of new arrivals (such as Americans, and other Europeans) that impact positively on innovation. Moreover, Niebhur (2006) shows that German regions with more diverse worker nationalities report a greater incidence of patenting.
Rather unexpectedly, there is precious little research on the ability of new arrivals to alter the incidence of innovation through the creation of entrepreneurial ventures (Sternberg and Muller, 2005). This is particularly surprising as entrepreneurial migrants may be of particular importance to innovation for two reasons. Firstly, they are more likely to take decisions about the introduction of innovations (as defined earlier), rather than merely engage in the process of invention (Sternberg and Muller, 2005). Secondly, they may influence the innovation system in their place of destination by virtue of their already existing networks of contacts – a point that has been of particular importance in the rural studies literature (Kalantaridis and Bika, 2006b). These lead to the formation of research question three below:

**RQ3: Are in-coming entrepreneurs more or less innovative than their locally-born counterparts?**

There is also some evidence suggesting that return-migration may influence positively the configuration of innovation systems (Stenberg and Muller, 2005). This draws from the experience of international return-migration, but may also provide suggestive lines of inquiry for rural areas and returnees from metropolitan centres. This literature suggests that return migrants may contribute significantly in the configuration of innovation systems in their place of origin, as they bring back knowledge and contacts when they return. This contributes in keeping the innovation system open to new knowledge and reduces technological lock-ins.
The Method

The adoption of a micro-level view in order to decipher the actor-constructed regional innovation system of rural Cumbria was central in determining the choice of method. Thus, this paper draws primarily on survey data from an EU funded project on rural entrepreneurship in Cumbria. The survey data used for the purposes of the paper are drawn from two datasets: one capturing the incidence and characteristics of entrepreneurship in the population and the second focusing on innovative enterprises. The population survey was used in order to explore the propensity of rural inhabitants to entrepreneurial activity. Based on the findings of desk-top research a stratified random sample of the population was identified. The sample was representative of the population in terms of age and gender (see Table 2). For the purpose of the survey a structured questionnaire was devised. The questionnaire included Sections on the personal details of the respondent (age, gender, socio-economic strata), educational and work experience, general perceptions of entrepreneurship, and (specific to those who display an entrepreneurial propensity) causes, processes and obstacles in the realisation of their enterprising potential. Some 2,000 inhabitants were randomly selected using telephone directories – which cover more than 95% of the total population. Some 500 questionnaires were completed in rural Cumbria between January and March 2001, corresponding to a response rate of 25% - which was deemed satisfactory given the means employed (telephone) and the national context.

A survey of innovative entrepreneurs was conducted in order to gain an in-depth understanding of the processes at work in the countryside. In order to monitor

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the innovative propensity of the enterprise a number of screening questions were asked during a small telephone interview. An additional stratification criterion used in the selection of the sample was sector. Thus, the innovative entrepreneurs surveyed are broadly representative of the population (in terms of sector) in the study area. For the purposes of the survey a questionnaire that combined closed (mainly) and open-ended (to a lesser degree) questions was used. The questionnaire included sections on the enterprise, the start-up process, product/service innovation, market change, technological change, information, and the entrepreneur. Some 320 companies, identified using standard commercial directories, were approached. A total of 100 interviews were completed, each lasting between one and three hours, between February and September 2001. This corresponds to a response rate of nearly 31%, a figure twice than that reported in previous postal surveys of rural entrepreneurs (Keeble et al, 1992; Mason and Harrison, 1993; Westhead et al, 2000), and modestly above that of previous face-to-face surveys (Smallbone et al, 1999).

The Locality

Rural Cumbria occupies a position in the geographical periphery of England, in the Northwest government region. The distance between London and Carlisle, the main urban centre within the study area is some 440 kilometres. This is translated to a five hours train journey, or anything between six and eight hours by car. The nearest major urban conurbations are Newcastle to the East (some 88 kilometres away), and Manchester to the South (160 kilometres).

Rural Cumbria, like many other rural areas in England, benefited from counter-urbanisation. Indeed, (1981-1998) demographic trends (at the time the study was conducted) indicated a modest population increase of 3.2% (ONS, 1991-2001).
However, the increase of the rural population was combined with a rapid expansion in the number of individuals beyond pensionable age. The new arrivals, by virtue of their higher incomes – than the local population – increased the level of effective demand, however, this remained well below that registered in urban agglomerations. As a consequence, the scope for expansion of local market focused entrepreneurial ventures was limited.

The significance of agriculture was only of secondary importance at the time of the survey: employing 4.2% of the economically active population in the case study area, a figure well above that for England as a whole (0.9%) (MAFF, 2001). Outside agriculture the single largest employer in rural Cumbria is manufacturing, accounting for 21.9% of the workforce (as of 1998), a figure well above that nationally (ONS, 2001). The significance of manufacturing in rural Cumbria was maintained despite a process of industrial demise throughout the 1990s. During the same period, jobs were created in smaller numbers in health and social work, trade, and hotels and restaurants. Thus, at the time of the survey trading activities were responsible for 18% of the non-agricultural workforce, whilst health and social work employed some 12%. The contribution of tourism is supported by the significance of hotels and restaurants – employing one in ten of those working outside agriculture.

The knowledge generating subsystem of Cumbria was shaped by the defining characteristics of rurality. As a consequence, higher educational provision was limited. Cumbria was – at the time that the study was conducted - one of a handful of counties in England without a local higher educational institution. Existing provision was confined to business studies, and agriculture and related fields (provided by local campuses of the University of Central Lancashire). The local business support network, and especially the Business Link and the West Cumbria Development
Agency were other main providers of training and skill development. However, the relative cost of appropriate support in a rural context was probably higher than that in urban conurbations. The R & D infrastructure, was also limited. The British Nuclear Fuels Ltd nuclear station in Sellafield constitutes the single most important R & D provider locally.

**Enterpreneurship, Innovation and the Configuration of Innovation Systems**

*Entrepreneurial Origin & Innovation*

The incidence of entrepreneurship in rural Cumbria, when the survey was conducted, compared unfavourably with the national average—as measured by the SBS Household Survey. Overall, 68 respondents, or some 15.1% of the population aged 16-64 years of age, could be defined as entrepreneurs. This figure was below that reported for England as a whole in the SBS Household Survey. Moreover, the incidence of entrepreneurship varied profoundly by origin. Returnees recorded the lowest incidence of entrepreneurial activity (8.3%) followed closely by locally-born individuals (11%). This is well below the figure reported by in-migrants (16%) and immigrants (33%). However, the incidence of entrepreneurship among immigrants needs to be treated with caution on account of the small number of respondents in the population survey (a total of just nine—though this is not dissimilar to the percentage of immigrants in rural Cumbria).

An analysis of the data regarding the innovativeness of entrepreneurs surveyed as part of the population survey, using the four categories of entrepreneurial origin, is presented in Table 2. This shows that returnees were the most innovative grouping, followed by immigrants and in-migrants. Locally-born entrepreneurs who have never
lived outside the locality reported innovative activities in only 24% of the cases. However, this data must be treated with caution as the number of returnee and immigrant entrepreneurs included in the population survey was very small (two and three). Disparities in the innovativeness of firms by entrepreneurial origin also emerge in the entrepreneurs’ survey. This survey focused on enterprises that maintained an element of novelty – either in terms of products/services, processes, markets or the age of the firm (start-up). Therefore, a greater incidence of innovation, than the population survey, was anticipated. The findings (also shown in Table 2) suggest that locally-born individuals who never moved outside the area were the least innovative group. In contrast, returnees and immigrants were the most innovative group. In this survey, the number of individuals falling in these two grouping were eleven and four respectively. The combined findings of the two surveys presented here indicate that entrepreneurial origin may be of importance in determining the innovativeness of the ventures created.

The Configuration of Innovation Systems by Entrepreneurial Origin

A number of variables were used in order to examine the origin of resources used by innovative enterprises in the study area. These revolved around the supply of labour, capital and other inputs, output destination, as well as the geographical origin of information. As far as the former variable is concerned, this was captured in terms of the percentage of the total workforce coming from outside Cumbria. A dichotomous variable was developed in order to capture whether there was any capital investment from outside the region. In addition to those variables (labour, capital), commonly used in the literature, the importance of the region as a source of other inputs (again as a percentage of the total), such as raw materials and equipment, was
also examined. In order to measure the importance of local markets a variable recording the percentage of total sales destined to the regional setting was used. Capturing the importance of the existing knowledge infrastructure was more than usually problematic. Therefore, a variable capturing the propensity of rural entrepreneurs to exploit localised/non-localised knowledge was deployed. Lastly, the geographical origin of sources of market information was captured. Data regarding these variables, by entrepreneurial origin, are presented in Figure 1. A position towards the centre of the Figure – in all of the variables examined here – indicates use of local resources, whilst a position at the edges of the Figure indicates utilisation of distant resources.

The evidence presented in Figure 1 indicates an emerging divide between locally-born and returnee entrepreneurs, on the one side, and in-migrant and immigrant entrepreneurs on the other. The former rely heavily on the study area as a source of inputs and information and the main destination of outputs. Indeed, less than one in ten receive capital from outside the area, whereas non local inputs (other than labour) account for 30% of the total among locally-born entrepreneurs and just 18% for returnees. This dependence on the locality is also apparent regarding know-how and market information. The latter is linked to the fact that both locally-born and returnee entrepreneurs direct the bulk of their outputs within the study area. Interestingly, returnee entrepreneurs appear to rely even more on the locality than their locally-born counterparts, for non-labour inputs, market information, and output markets. In contrast, in-migrants and immigrant entrepreneurs draw inputs (apart from labour) and information, and direct their outputs nationally and even internationally. The latter is particularly the case regarding immigrant entrepreneurs.
Concluding Remarks

The evidence presented here suggests that this rural locality imposed constraints on the innovative activities of entrepreneurs. The relatively small size of the local market, and the weak knowledge infrastructure are two key challenges confronting all entrepreneurs in rural Cumbria. However, labour market issues appear not to influence adversely entrepreneurs. Thus, regarding RQ1, the papers shows that the locality imposes some constraints, but also confers some advantages to rural innovative enterprises. On the other hand, the survey data analysis illustrates considerable diversity in the configuration of innovation systems by entrepreneurial origin (RQ2). Another argument advanced in this paper shows that the incidence of innovation is higher for entrepreneurs who have spent at least part of their life elsewhere if compared with the locally-born ones (RQ3). To this extent, the impact of migration (both inward and return) on rural innovation in terms of available human capital is a positive one and incoming entrepreneurs are more likely to introduce something new and commercially useful. In the case of immigrant and in-migrant entrepreneurs this may be on account of pre-existing (i.e. before the migratory move) social capital that helps them establish relations with distant sources of innovative inputs and markets. This is not the case regarding returnee entrepreneurs.

The paper also advances a conceptual distinction between regional innovation systems (defined in the literature as an analytical unit, captured through macro-level methodologies, and possessing a normative dimension) and actor-constructed regional innovation systems (predominantly descriptive of real linkages between actors, captured through micro-level methods, and without a normative dimension). This divide is particularly relevant in the case of rural Cumbria, an area that possesses a weak knowledge generating subsystem, whilst the production subsystem demonstrates
considerable (more than the national average) reliance on manufacturing and agriculture. As a result, it does not conform with widely held views regarding regional innovation systems. This divide between a regional innovation system and an actor-constructed regional innovation system, raises a number of interesting questions for researchers in the field. In instances (like rural Cumbria) where reality appears to exceed normative expectations it posses the issue of how can entrepreneurial agents overcome the constraints imposed by the regional knowledge subsystem. Moreover, it also questions the impact of establishing an actor-constructed regional innovation system that goes well beyond the confines of the locality, on the ability of the regional research infrastructure to develop: i.e. is the ease of tapping into distant resources diminishing the demand for developing these locally? However, this divide can also be used to decipher instances where reality falls behind normative expectations. This could include regional setting with strong knowledge generating subsystems that fail to impact on the incidence of innovation in production subsystems. What are the factors that restrict the ability of the latter to utilise the former, and how can these obstacles be overcome? These issues turn the focus of inquiry on the interface between the organisation and its context, maintaining a strong territorial dimension but also offering scope for openness and centred around innovative actors.
References


Table 1: Sample Characteristics: Gender, Age and Sector

<table>
<thead>
<tr>
<th>Gender and Age Breakdown of the Population Survey and the Study Area</th>
<th>Sectoral Breakdown of Entrepreneur Survey and the Study Area</th>
</tr>
</thead>
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<tr>
<td>Gender</td>
<td>Age</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Male</td>
<td>18-34</td>
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<tr>
<td></td>
<td>35-49</td>
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<tr>
<td></td>
<td>50-64</td>
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<tr>
<td></td>
<td>65+</td>
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<tr>
<td>Total</td>
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</tr>
<tr>
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<td>18-34</td>
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<td></td>
<td>35-49</td>
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</tr>
<tr>
<td>Total</td>
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</tr>
</tbody>
</table>


Table 2. Innovativeness by Entrepreneurial Origin in the Population and the Entrepreneurs’ Survey

<table>
<thead>
<tr>
<th>Locally-born</th>
<th>Returnees</th>
<th>In-migrants</th>
<th>Immigrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some Innovation (%)</td>
<td>24</td>
<td>100</td>
<td>53</td>
</tr>
<tr>
<td>Entrepreneurs’ Survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some product/service innovation (%)</td>
<td>77</td>
<td>90</td>
<td>91</td>
</tr>
<tr>
<td>Some process innovation (%)</td>
<td>50</td>
<td>70</td>
<td>91</td>
</tr>
</tbody>
</table>

Source: Population & Entrepreneurs’ Survey
Figure 1. The Configuration of Innovation Systems by Entrepreneurial Origin
Power of the Past and SME Competitiveness: A European Study


Abstract
Enterprise Cultural Heritage (ECH) is an innovative and complex concept combining the company’s own history and creations (technical contents, industrial design, organization, marketing, etc.) with the potential to transform information and materials into “extended products & services”. This paper drawing on the results of a review of the literature and a survey of 60 Small and Medium-sized Enterprises (SMEs) based in four European Union (EU) countries argues that effective ECH management can increase creativity in production and innovate knowledge management skills. The current study makes two distinct contributions: Firstly, it introduces the ECH concept and embeds it in a broad body of literature. Secondly, it provides evidence-based insights into the potential impact of using ECH in order to enhance competitiveness.

Introduction
The age of the firm has been an important consideration within that body of knowledge broadly defined as SME (small and medium sized enterprises) studies. Research within this context has focused primarily on the impact of size on the performance as well as constraints confronting small firms. This work followed two distinct trajectories: the first being primarily theoretical, involving the development of life cycle models; whilst the second being primarily empirical: drawing evidence of survival and growth rates in Europe and the United States.

Theories of SME life cycle are defined by the tenet that the growth of the firm is characterised by a number of predictable, discrete and consistent stages (Churchill and Lewis, 1983; Scott and Bruce, 1987; Parsons, 2006). These stages are sequential in nature and occur as a process of progressions that can not be easily reversed (Dodge and Robins, 1992). This is partly because each stage is both an effect of the previous
one and a cause of the next. An important aspect of these theoretical constructs is that transition from one stage to another requires considerable change – defined as ‘developmental crises’ (Greiner, 1972). Thus, there is considerable emphasis placed by researchers in examining the nature of these crises, and exploring how entrepreneurs need to revisit their strategies and behaviours and adapt to the emerging conditions (Quinn and Cameron, 1983).

Empirical research on the relationships between the age of the SME and performance has been extensive and inconclusive. There is a body of evidence supporting the thesis that it is new businesses that have a disproportionate impact on jobs (Birch, 1979). This argument – linked to a variant of Schumpeter’s view on entrepreneurship and innovation – is supported by empirical evidence showing the growth rate of SMEs in negatively associated with the age of the firm (Carroll, 1983; Freeman et al, 1983; Evans, 1987). However, there is also recognition that younger firms have a higher mortality rate than established ones (Hannan, 1989). Thus Dunne et al (1989) argued that holding size and ownership constant, increasing age was associated with lower failure rates. Thus, the second argument advances the thesis that it is established businesses that make the most important contribution in terms of employment in the long-term (Storey, 1994; Patel, 2005).

Both theoretical and empirical approaches recognise the importance of organisational learning in the evolution of SMEs. However, they place precious little importance on the impact that the cumulative body of knowledge and firm continuity and perception in the marketplace may have on firm competitiveness. This paper aims to address this gap in the literature by introducing the concept of enterprise cultural heritage, and
exploring how it is used and its implications for SME performance in four European countries (namely the UK, Greece, Finland and Italy). It is worth pointing out from the outset that this is an exploratory study aimed at introducing the concept and identifying some key issues. Thus, the number of SMEs involved is modest – fifteen in each country.

The paper is organised as follows. The next Section defines ECH and identifies a number of key research questions. The paper proceeds with an examination of the methods used in the data collection process, as well as providing an outline of the key issues explored in the questionnaire. This Section also discusses – in some detail – the limitations of the study. Then the paper proceeds in presenting the results of the survey of established SMEs in four EU countries. Lastly, the paper offers some conclusions – focusing particularly on the two research questions identified earlier on in this Section.

**The Concept and Research Questions**

Enterprise Cultural Heritage (ECH) is an innovative and complex concept combining the company’s own history and creations (technical contents, industrial design, organization, marketing, etc.) with the potential to transform information and materials into “extended products & services”. It is a company asset that is derived from its historical evolution. This asset is made up of tacit and explicit knowledge. This knowledge focuses on products/services (and the overall brand identity of the firm), processes (and technologies), functions, and organisational structures. It can be used to underpin future competitiveness through originality, innovation and quality.
The concept draws insight from a broad range of literature including: Marketing, Product Development & Innovation, Organisational Culture and Knowledge Management. However, to date, this has achieved precious little attention in the academic literature. It can be regarded as part of company’s knowledge capital, but as Sedera, Gable and Chan (2004) argue that the exploitation of knowledge of an organisation, resides not in the knowledge itself, but in the ways that knowledge is used and re-used.

This concept is important as it is relevant to large number of SMEs. More specifically, in Italy, there are more than 11,000 SMEs that are more than 40 years old (Enterprises Registry Dataset), some 290,000 SMEs in the UK also fall in this group (Federation of Small Businesses), whilst in Greece there are 6,140 enterprises. The number of such firms will be smaller in post-socialist regimes (such as the Czech Republic), however, there are similar opportunities for privatized firms as well as new SMEs that tap into the ECH of the socialist or even pre-socialist era.

The introduction of a concept/asset (ECH) that may enhance SME competitiveness the world over raises the question of awareness of this potential among entrepreneurs. To what extend do they view the firm’s repository of knowledge as meriting investment, and how does this influence their decisions? This prompted the development of the following research question:

*Research Question 1:* How do established SMEs (if at all) exploit the potential involved in their enterprise cultural heritage?
Establishing the degree to which entrepreneurs in SME sector are aware of the potential of ECH, takes us only part of the way in establishing the business practice implications of this paper. Indeed, what remains of paramount importance is the degree to which the ECH management may influence the survival and growth of the firm. This led to the development of the paper’s second research question, below:

Research Question 2: Is there any link between the exploitation of enterprise cultural heritage and SME survival and growth?

Methodology

A survey of established enterprises was conducted in early 2010 in order to gain an in-depth understanding of the processes involved in exploiting ECH. In order to identify established SMEs a number of selection criteria were used. These included: independence (i.e. the organisation in question was not a branch or subsidiary of another), size (using the EU definition enterprises employing only up to 250 people with annual turnover ≤ € 50 million or balance sheet total of ≤ € 43 million were selected) and age of the firm (identifying enterprises that have been in existence – at the time of the survey for a period of 40 years). The rationale behind the 40 years was that these companies are more likely to have had to pass on their product and services knowledge through at least one generation of employees. An additional stratification criterion used in the selection of the sample was sector. Thus, established SMEs surveyed were involved in craft activities. This is defined in the EU SME Observatory as artisan production in food, textiles, and other (ceramics & jewellery) industries. More specifically, regarding the sectoral breakdown of the established SMEs surveyed is concerned, the majority (just over half) were involved in the food sector, with just over a quarter engaged in textiles and clothing manufacture. The remaining
one fifth of the firms surveyed were in other craft activities. The choice of the craft sector is on account of the importance of cultural heritage (e.g. local products, traditional design etc) as a source of competitive advantage.

For the purposes of the survey a questionnaire that combined closed (mainly) and open-ended (to a lesser degree) questions was used. The questionnaire included sections on the firm’s awareness of ECH, the skills needed in order to exploit ECH in the firm, obstacles to the use of ECH, and general information about the SME and its performance. Some 370 companies, identified using standard commercial directories, were approached. A total of 60 interviews were completed, each lasting between 30 and 45 minutes, between January and April 2010. This corresponds to a response rate of just over 16%.

Before the presentation of the findings some key limitations must be noted. Firstly, the data used are self-reported responses to a questionnaire. This raises two important considerations: self-report bias and self-selection bias. Considerable efforts have been made in the design and implementation of the research to address these issues. Thus, a number of controlled questions have been introduced in the instrument to monitor the responses given. In some instances corrective action has been taken when individual respondents made contradictory statements. As far as the issue of the self-selection bias is concerned, the organization of the fieldwork and the ensuing satisfactory response rate provide a considerable degree of confidence in the results. Secondly, the survey instrument provides a snapshot of firms at the time of the fieldwork research restricting the ability to capture processes that evolved through time.
It is also worth pointing out that the data were collected in early 2010, a period of considerable economic adversity globally. This is a period of increased difficulty – for SMEs – to access finance and economic contraction. During the interviews the impact of hostile macro-economic conditions was raised extensively by interviewees. This may have affected findings somewhat, as levels of investment and growth levels may have been influenced as a result.

**Findings**

Despite the absence of published work on the use of ECH as a means of enhancing SME competitiveness, the great majority (some 89%) of the enterprises surveyed explored the use of their cultural heritage as a way of adding value. Given the rather abstract nature of this introductory question, interviewees were also asked if they have invested resources in order to preserve or manage their ECH for business purposes. Interestingly, just over one in every three SMEs responded positively to this question. There were some very interesting disparities in the incidence of investment in ECH by country. Established SMEs located in Greece reported the lowest incidence of investment in ECH – just 7% - whilst their counterparts in Italy the highest, some 56%. Just over one in four of responded in both the UK and Finland indicated investment in ECH. Rather unexpectedly, there were precious little difference in ECH investment by sector – ranging between 25%, for other craft sectors, and 30%, in textiles and clothing. The food sector, where we expected probably the highest incidence of investment on ECH – on account of the growing importance attached to local products – occupied a position between these two ends.
In order to identify the areas where established SMEs utilised their ECH, interviewees were asked a series of questions (each focusing on a specific area) using a Lickert type measure (ranging from 1 which indicates unimportant to 4 which indicates vital). Not unexpectedly, established SMEs overwhelmingly stressed the use of ECH on product quality (mean of 3.41) and brand image (3.13). Two other areas of importance revolved around the development of management competences within the organisation (3.03) and the development of personalised relations within the firm (2.95).

Similarities and disparities emerged between countries and sectoral contexts. More specifically, product quality was identified as the main area of utilisation of ECH in the UK, Finland, Italy and Greece. However, in the UK and Finland ECH was used in order to develop the skills of the employees, whereas in Italy this was linked with the development of personalised relationships within the firm, and in Greece this revolved around brand identity. As far as sectoral patterns are concerned, there was commonality in stressing the importance of product quality was identified as the main area of ECH utilisation. Brand image was stressed as the second most important area among established SMEs in the food sector and those firms working in textiles and clothing, whereas originality was stressed among enterprises in other craft industries.

Enterprises surveyed were then asked to identify the benefits conferred through ECH management. As expected some two thirds of the enterprises surveyed pointed at the importance of ECH as a means of building customer loyalty. Interestingly, the second most commonly reported benefit was an increase in employee commitment to the values and goals of the firm, identified by 65% of the total. Other responses included
enhanced innovativeness of the organisation (50%), increased sustainability of production (42%) and decreased costs (18%). There were precious few systematic differences in response by country and sector.

This brings to the fore the issue of the impact of ECH management on SME survival and growth. These two issues were dealt separately in the analysis. As far as SME survival is concerned, and in the absence of historical records going back long enough (the oldest SME surveyed was established in 1731, whilst around one fifth were created before 1900) an unconventional approach was followed. This was based on the view that the age structure of SMEs will take the shape of pyramid – whereby the percentage of firms will decline by age. Evidence from the established enterprises surveyed (see Figure 1 below) indicates that this is the case regarding established SMEs that did not invest in ECH management. Interestingly, however, this is not the case regarding established SMEs that did invest in ECH management. This lends some – though not conclusive – support to the thesis that investment in ECH management may enhance the ability of SMEs to survive.

Figure 1. Age Structure of SMEs by Investment (on not) in ECH management
As far as growth rates are concerned, given the importance of informality in the clothing industry – especially in Greece – it was decided not to pursue change in absolute numbers. Entrepreneurs were therefore asked to evaluate performance using a three point, scale (whereby 1 indicates growing strongly and 3 indicates not growing – including decline). Evidence shows that nearly three times as many established SMEs that invested in ECH management recorded strong growth in comparison to those that did not – 29% and 11% respectively.

Country and sector influence the intensity of the link between investment in ECH management and SME performance. More specifically, investment in ECH management was related to strong performance particularly in the UK (strong growth recorded by five times as many SMEs that invested than not). In terms of sector, investment is linked with strong performance in food, whilst the reverse is the case regarding textiles and clothing.

**Concluding Remarks**

Before drawing conclusions regarding the findings of this study it is worth re-iterating its exploratory nature. Therefore, the number of established SMEs surveyed is modest, the sectoral breakdown is limited – concentrated only on craft sectors – and it involves a snapshot in one point in time, rather than a longitudinal observation of the processes involved in exploiting ECH.

However, the paper identifies and develops a new dimension in that body of literature exploring the impact of the age of firm on SME development. This dimension is captured here with the concept of enterprise cultural heritage. This is an innovative
and complex concept combining the company’s own history and creations (technical contents, industrial design, organization, marketing, etc.) with the potential to transform information and materials into “extended products”. This definition can provide the point of departure of empirical research into ECH management and SME survival and growth.

At the outset the paper set out to address two key research questions. The first examined: how do established SMEs (if at all) exploit the potential involved in their enterprise cultural heritage? The results of the survey indicate a much higher, than originally anticipated, awareness of the advantages in exploiting ECH among established SMEs. Even though only a minority – around a third – actually invested in realising this potential, this shows that entrepreneurial views are leading scholarly understanding. The paper also shows the key areas of ECH use within established SMEs. This involves some areas that were widely anticipated by the researchers involved in the study from the outset (such as product quality and brand image). However, it also includes relational and human capital issues: such as skills, managerial competences, and relationships within the firm. This issue requires further investigation: examining particularly the impact of firm heritage on the prevailing organisational culture. Lastly, the paper indicates that further research in ECH management needs to be particularly sensitive to the specificities of the country and sector context.

The second research question of the paper focuses on the existence (or otherwise) of link between the exploitation of enterprise cultural heritage and SME survival and growth. There is some evidence supporting the thesis that ECH management may be
positively linked with both the ability of the firm to survive and grow in established SMEs. This can be understood conceptually in terms of exploiting an existing source of competitive advantage that may assist in differentiating established SMEs. Moreover, it links with the paper’s point of departure: understanding enterprise cultural heritage as an asset. Undoubtedly additional research is needed – using more sophisticated measures of growth and larger sample sizes – in order to provide conclusive results. Country and sector specificities also need to be taken into account in examining the link between ECH and SME survival and growth.

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Bibliography


Factors on the perception of entrepreneurial opportunities and their influence on entrepreneurial intention – an empirical study
by M. Geissler and C. Zanger

This empirical study examines the impact of entrepreneurial opportunities on the formation of entrepreneurial intentions. Furthermore, factors which influence opportunity perception and intention creation were analyzed. The results show that opportunity perception is the main driver in the intention creation process and is influenced by entrepreneurial attitude and self-efficacy. Moreover, there are significant differences between women and men regarding the role of self-efficacy and opportunity recognition. While in the male sample opportunity recognition fully mediates the relationship between self-efficacy and intention the female sample indicates an additional effect of self-efficacy on intention. Furthermore, differences in the impact of entrepreneurial role models came to light.

Introduction

The identification of business opportunities, their selection and finally their exploitation are one of the main drivers of new business creation and entrepreneurship research (Ardichvili et al., 2003); Shane and Venkataraman, 2000). Bygrave and Hofer’s (1991) definition of the term entrepreneur illustrates this close relationship at best. Following these authors “An Entrepreneur is someone who perceives an opportunity and creates an organization to pursue it.” Furthermore, all actions which could be associated with the perception of opportunities and the creation of an organization to pursue them constitute the entrepreneurial process (Bygrave and Hofer, 1991).

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Beyond doubt, understanding this process and its antecedents is one of the major topics in entrepreneurship. Hence, extensive research led to the development of different models aiming at deepening our understanding of this process - frequently stimulated by findings from different fields of psychology. Two approaches became main-influential within today’s entrepreneurship theory, namely the Entrepreneurial Event Model by Shapero (1982) and models inspired by the Theory of Planned Behavior (Ajzen, 1991).

Among both approaches, there is consensus that the intention to become self-employed is a strong predictor of entrepreneurial behavior. However, up to now a direct and explicit link between the research in entrepreneurial intention and the perception and exploitation of business opportunities seems to be missing.

This study aims to shed light on this interconnection and on factors which might be crucial for both, the perception of business opportunities and the development of self employment intentions.

We believe that integrating the perception of business opportunities within established and proven theory of entrepreneurial intention might be important for several reasons. First, knowing about factors which stimulate opportunity perception and intention creation might help to increase our understanding of the business creation process from the very beginning. Second, focusing the nexus of opportunity and intention creation promises further avenues for stimulating entrepreneurial behavior.

Our research proceeds as follows. Starting with reviewing the entrepreneurial intention literature (Carr and Sequeira, 2007; Degeorge and Roberts, 2008; Gird and Bagraim, 2008; Kolvereid and Isaksen, 2006; Liñán and Chen, 2009; Liñán, 2008) and the entrepreneurial opportunity literature (e.g., Baron, 2006; Krueger, 2000; Krueger, 2003; Shane, 2000; Shane and Venkataraman, 2000), we introduce the entrepreneurial opportunity within the intention
creation process and suggest an integrated model. Next, we discuss the sample, the employed measures and the methodology used to validate the model empirically. Finally, we report the results of our analysis and draw conclusions of these findings and their implications for further research, educators, policy makers as well as practice.

**Literature Review**

Previous research identified several factors which might affect the creation of strong entrepreneurial intentions. One important factor has been found in the degree the individual is attracted toward becoming self-employed. This point is represented by the psychological concept of **attitude towards self-employment** (Segal, Borgia, and Schoenfeld, 2005). Results of numerous empirical studies give evidence of the relevance of the attitude concept as a strong and reliable predictor of entrepreneurial intent (Carr and Sequeira, 2007; Degeorge and Roberts, 2008; Gird and Bagraim, 2008; Kolvereid and Isaksen, 2006; Liñán and Chen, 2009; Liñán, 2008).

Furthermore, the concept of **self-efficacy** was found to be a critical determinant of the intention (Bandura, 1997; Cooper and Park, 2008). For entrepreneurship research that implies that the individual judgment of one’s own capabilities required for self-employment might be an important factor of entrepreneurial intention (e.g., Carr and Sequeira, 2007; Cooper and Park, 2008; Kolvereid and Isaksen, 2006; van Gelderen, Brand, van Praag, Bodewes, Poutsma, and van Gils, 2008).

The existence of **role models** constitutes an additional factor affecting the entrepreneurial process, as it influences career expectancy. In addition, positive effects arrive from the simple present of a role model as well as its performance (Scherer, Carley, and Wiebe, 1989). Krueger et al. (2000) underlined, that the effect of entrepreneurial role models on intention can be increased if they have an impact on attitude and self-efficacy. Different authors analyzed these relationships and demonstrate significant positive effects from role models on
entrepreneurial self efficacy and attitude (Arenius and Clercq, 2005; Chen, Greene, and Crick, 1998; Crant, 1996). The results of Allen (2000) suggest that not only the presence of the role model and its performance are crucial for the entrepreneurial process. Moreover, the results give evidence that the role models’ origin (e.g., family or friends) might be a further factor.

Overall, entrepreneurial opportunities are defined as “situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production.” (Casson, 1982; Shane and Venkataraman, 2000). Furthermore, Eckhardt and Shane (2003: 336) add that this could be enabled “through the formation of new means, ends or ends-means relationships. […] In addition, unlike optimizing or satisficing decisions, in which the ends that the decision maker is trying to achieve and the means that the decision maker will employ are given, entrepreneurial decisions are creative decisions, That is the entrepreneur constructs the means, the ends or both.”.

Based on these fundamental assumptions, recent literature provides two major approaches that try to explain the creation of new business opportunities. The first stream proposes that opportunities are recognized due to specific individual features distinguishing entrepreneurs from non-entrepreneurs. This literature supposes that entrepreneurs have specific search techniques and scanning behaviors or a specific ability that allows superior information processing (Baron, 2006). In this view, opportunities are constructed and intentionally perceived (Krueger, 2000; Krueger, 2003). The second stream gives evidence that opportunities are discovered (Shane, 2000). This research refers to the nature of an opportunity meaning that it is unknown by definition until its discovery. This seems to deny an intentional and conscious perception. It is argued that people can discover opportunities even without an active search for them.

However, there is evidence that both possibilities - described within the two streams - might happen in entrepreneurial practice. Bhave (1994) describes this phenomenon as internally and
externally stimulated opportunity recognition. His empirical study reveals that 59 percent of the analyzed business creations where stimulated externally and 41 percent internally.

However, while for externally stimulated opportunities the recognition of market or customer needs acts as a starting point for business creation it remains unanswered what factors might stimulate the internally stimulated opportunity exploitation process.

Overall, there is theoretical support and empirical evidence that factors which influence the formation of an entrepreneurial intention might influence people’s ability to perceive business opportunities as well. Existing literature suggests that the ability to perceive business opportunities differs among people (e.g., Venkataraman, 1997; Shane, 2000; Shane and Venkataraman, 2000; Baron and Ensley M. D., 2006; Baron, 2008). The work of Shane (2000) highlights that different knowledge about markets and market needs influence the opportunity discovery process. But knowledge might not only influence the discovery process. The acquisition, storage and use of knowledge are central for human information processing. The term knowledge represents information that is combined with a person’s own experiences, a specific context or interpretations and reflections. Its application guides peoples’ decision making and behavior consciously and unconsciously. Hence, the knowledge a person holds in memory can be crucial for the whole opportunity recognition process from the very beginning. Present studies indicate that the extent of domain-specific knowledge determines the fact if a person becomes aware of a specific opportunity (Haynie, Shepherd, and McMullen, 2009). Furthermore, Ozgen and Baron (2007) demonstrate that the individual judgment of one’s knowledge and skills regarding entrepreneurial tasks - entrepreneurial self-efficacy - influences the process of opportunity recognition to a high extent (e.g., Ardichvili, Cardozo, and Ray, 2003; Ozgen and Baron, 2007; Park, 2005).

In addition, research results in psychology highlight the importance of attitudes on perception, information storage and information retrieval (e.g., Basili 1996; Holbrook et al. 2005). Hence,
the fact that a person lacks a positive attitude towards entrepreneurship might inhibit that business opportunities will be perceived.

Finally, there is evidence that entrepreneurial **role models** might have positive effects on the perception of business opportunities (Aldrich and Cliff, 2003; Jack and Anderson, 2002).

Taking this into account, we propose an entrepreneurial process model which links opportunity perception with entrepreneurial behavior via the intention to become self-employed. Furthermore, we propose that the attitude towards self-employment and self-efficacy influences both, opportunity perception and intention. In turn, the perception of role model performance is assumed to affect attitude, opportunity recognition and self-efficacy.

**Figure 1: Conceptual model**

Finally, recent research suggests that there are differences within the entrepreneurial process between female and male. These results indicate that women and men have unique stocks of human capital that they use differently in the opportunity recognition process (Arenius and Clercq, 2005; DeTienne and Chandler, 2007; O'Connor, Hamouda, McKeon, Henry, and Johnston, 2006). Empirical studies in entrepreneurial self-efficacy and intention come to similar findings: there are gender differences within the entrepreneurial process (Lee and Wong, 2004; Wilson, Kickul, and Marlino, 2007).
**Method**

We collected data for this study through a survey at two German universities. In total, 271 students returned the standardized questionnaires. Of the respondents, 45.6 percent were female. Mean age was 24.4 (SD=3.56).

Respondents rated all measures on seven-point Likert-type scales (1=‘totally disagree’, and 7=‘totally agree’) or semantic differentials. Intention was measured with three (Lüthje, Franke 2003, \( \alpha=.94 \)), attitude with four (Bagozzi, Dholakia 2006, \( \alpha=.92 \)) and entrepreneurial self-efficacy with five items ((Chen et al., 1998, \( \alpha=.93 \)). For opportunity recognition we used three items (Ozgen and Baron, 2007; \( \alpha=.88 \)). First entrepreneurial behavior was measured by asking participants if they had performed several venture-creation related behaviors within the last year (de Clercq, Arenius 2006). The list contained behaviors such as organizing a spin-off team, looking for a spin-off location, or working on a business plan. Furthermore, referring to Scherer (1989) we asked participants if they came in touch with entrepreneurship among family or friends and how they rate the role models’ performance regarding financial return and satisfaction with the work. The means, standard deviations and correlations are provided in table 1. Factor loadings, composite reliability, average variance extracted, highest squared correlation between the model constructs, coefficient of determination, and predictive relevance reliabilities for all of our multi-item scales are listed in table 2 and 3.

Table 1: (N = 271)

<table>
<thead>
<tr>
<th></th>
<th>female M</th>
<th>female SD</th>
<th>male M</th>
<th>male SD</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
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<tbody>
<tr>
<td>(1) role model performance</td>
<td>2.26</td>
<td>1.97</td>
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<td>1.39</td>
<td>.17</td>
<td>-</td>
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<tr>
<td>(3) self-efficacy</td>
<td>4.68</td>
<td>1.16</td>
<td>4.69</td>
<td>1.34</td>
<td>.22</td>
<td>.35</td>
<td>-</td>
<td></td>
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<tr>
<td>(4) opportunity recognition</td>
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<td>1.45</td>
<td>3.37</td>
<td>1.66</td>
<td>.19</td>
<td>.50</td>
<td>.43</td>
<td>-</td>
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<tr>
<td>(5) intention</td>
<td>2.75</td>
<td>1.97</td>
<td>3.10</td>
<td>2.00</td>
<td>.18</td>
<td>.58</td>
<td>.34</td>
<td>.72</td>
<td>-</td>
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<tr>
<td>(6) nascent behavior</td>
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<td>1.02</td>
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<td>1.40</td>
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<td>.42</td>
<td>.28</td>
<td>.52</td>
<td>.63</td>
<td>-</td>
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<tr>
<td>(7) gender</td>
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<td>NA</td>
<td>NA</td>
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<td>.12</td>
<td>.00</td>
<td>.18</td>
<td>.09</td>
<td>.13</td>
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</tbody>
</table>

**NOTE:** M = mean, SD = standard derivation, NA = not applicable; correlations > .12 are significant at \( p < .05 \). Correlations > .17 are significant at \( p < .01 \); gender: female = 0, male = 1.
To analyze the data and estimate the impact of the different factors within the model we chose partial least squares (PLS) structural equation modeling (Fornell and Bookstein, 1982; Wold, 1982) employing SmartPLS 2.0 (Ringle et al., 2005).

Table 2: Evaluation of the reflective measurement model for the female sample (N = 123)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Factor Loadings</th>
<th>CR (≥0.7)</th>
<th>AVE (≥0.5)</th>
<th>Fornell/Larcker (AVE &gt; Corr²)</th>
<th>R² (&gt;0.3)</th>
<th>Q² (&gt;0)</th>
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<td>financial control</td>
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<tr>
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<td>.39</td>
<td>.25</td>
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<td>.43</td>
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<td>int3</td>
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<tr>
<td>nascent behavior</td>
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<td>.45</td>
<td>.45 &gt; .34</td>
<td>.27</td>
<td>.11</td>
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<td>.66</td>
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</table>

NOTE: M = mean, SD = standard derivation, CR = composite reliability, AVE = average variance extracted, Corr² = highest squared correlation between the model constructs, R² = coefficient of determination, Q² = predictive relevance (Stone-Geisser criterion)

As reported in table 2 and table 3 all measurement models show values above the required thresholds regarding reliability, convergent and discriminant validity (Fornell and Larcker, 1981; Hair et al., 2006). Therefore, we suggest that our measures are reliable and valid. Furthermore, a Q² value greater than zero indicates that there is predictive relevance within the structural relationships (Fornell and Cha, 1994).
### Table 3: Evaluation of the reflective measurement model for the male sample (N = 148)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Factor Loadings</th>
<th>CR</th>
<th>AVE</th>
<th>Fornell/Larcker</th>
<th>R² (≥0.3)</th>
<th>Q² (≥0)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(≥0.707)</td>
<td>(≥0.7)</td>
<td>(≥0.5)</td>
<td>(AVE &gt; Corr²)b</td>
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<td>0.81 &gt; 0.37</td>
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<td>att2</td>
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<td>att3</td>
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<td>att4</td>
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<td>.04</td>
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<td>management</td>
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<td>opportunity recognition</td>
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<td>or1</td>
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<tr>
<td>location</td>
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<td>0.55 &gt; 0.49</td>
<td>.36</td>
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Notes: M = mean, SD = standard derivation, CR = composite reliability, AVE = average variance extracted, Corr² = highest squared correlation between the model constructs, R² = coefficient of determination, Q² = predictive relevance (Stone-Geisser criterion)

### Results

The structural models (see figure 2 and 3) for both sub samples demonstrate that opportunity recognition is the main driver for intention creation for both samples (female: β = .41; p < .01; male: β = .69; p < .01) and is strongly influenced by attitude (female: β = .30; p < .01; male: β = .40; p < .01) and self-efficacy (female: β = .33; p < .01; male: β = .34; p < .01) to nearly the same extent. Furthermore, in both samples attitude shows significant effects on intention (female: β = .26; p < .01; male: β = .26; p < .01) while self-efficacy fails in the male sample (female: β = .19; p < .01). For the female sample a significant effect from self-
efficacy on intention is obvious. In addition, role model performance influences self efficacy in both samples \( \text{female: } \beta = .31; p < .01; \text{ male: } \beta = .20; p < .01 \) and attitude \( \text{female: } \beta = .22; p < .01 \) in the female sample. According to theory there is also a strong link from intention to behavior \( \text{female: } \beta = .52; p < .01; \text{ male: } \beta = .60; p < .01 \).

**Figure 2: The structural models with path coefficients for female sub-samples (standardized values)**

![Diagram of the structural model for female sub-samples](image)

*Note: All paths with $\beta > .15$ are significant at $p < .01$; $N=123$*

Additional analysis following Baron and Kenny (1986) shows that opportunity recognition mediates the relationship between self-efficacy and intention.

**Figure 3: The structural models with path coefficients for male sub-samples (standardized values)**

![Diagram of the structural model for male sub-samples](image)

*Note: All paths with $\beta > .15$ are significant at $p < .01$*
We can identify several differences in the extent of the path coefficients when we compare female and male sample as shown in Figure 2. We used the following formula (Chin, 2000) to calculate whether the differences between both samples are significant:

\[
t = \frac{Path_{sample_1} - Path_{sample_2}}{\sqrt{\frac{(m-1)^2}{(m+n-2)} S.E_{sample_1}^2 + \frac{(n-1)^2}{(m+n-2)} S.E_{sample_2}^2}} \times \sqrt{\frac{1}{m} + \frac{1}{n}}
\]

with \( m \) being the cases in the female sample (123), \( n \) the cases in the male sample (148) and S.E. the standard error of the respective sample.

We identified significant differences regarding the effect of opportunity perception on intention and intention on nascent behavior (see Table 4) when we examined both groups. All other differences proved to be not significant.

Furthermore, if we consider the characteristics of the formative indicators of role model performance we recognize that for female students it might be more necessary that the family role model is successful. Male students in turn, seem to focus more on the success of friends and their entrepreneurial experiences.

### Table 1: Significance of path differences between faculty and students

<table>
<thead>
<tr>
<th>Path</th>
<th>female</th>
<th>male</th>
<th>( T ) statistics path differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Model -&gt; Attitude</td>
<td>.23</td>
<td>.13</td>
<td>.968</td>
</tr>
<tr>
<td>Role Model -&gt; Opportunity Recognition</td>
<td>.12</td>
<td>.03</td>
<td>.758</td>
</tr>
<tr>
<td>Role Model -&gt; Self-Efficacy</td>
<td>.31</td>
<td>.20</td>
<td>.919</td>
</tr>
<tr>
<td>Attitude -&gt; Intention</td>
<td>.26</td>
<td>.26</td>
<td>0</td>
</tr>
<tr>
<td>Attitude -&gt; Opportunity Recognition</td>
<td>.30</td>
<td>.40</td>
<td>-.893</td>
</tr>
<tr>
<td>Opportunity Recognition -&gt; Intention</td>
<td>.41</td>
<td>.69</td>
<td>-.893</td>
</tr>
<tr>
<td>Self-Efficacy -&gt; Opportunity Recognition</td>
<td>.33</td>
<td>.34</td>
<td>.095</td>
</tr>
<tr>
<td>Self-Efficacy -&gt; Intention</td>
<td>.19</td>
<td>-.09</td>
<td>3.340**</td>
</tr>
<tr>
<td>Intention -&gt; Nascent Behavior</td>
<td>.52</td>
<td>.60</td>
<td>-.954</td>
</tr>
</tbody>
</table>

Note: * \( p<0.1 \); ** \( p<0.01 \)
Implications

The purpose of this study was, first, to shed light on the interconnection between the perception of business opportunities and the entrepreneurial intention and, second, to examine factors which might be crucial for both, the perception of business opportunities and the development of self employment intentions.

Thereby, the study reveals the link between opportunity recognition and intention towards self-employment and behavior. It turns out that both - attitude towards self-employment and entrepreneurial self-efficacy - have an important impact on opportunity recognition. In turn, the ability to recognize opportunities is strongly linked to entrepreneurial intention. Furthermore, the mediation effect found has important practical implications. Instruments aiming at fostering entrepreneurship may develop entrepreneurial self-efficacy and make positive attitudes toward entrepreneurship more salient. Furthermore, instruments enhancing opportunity recognition might be employed. For one important reason: If opportunity recognition is lacking there will be little chance for establishing a strong entrepreneurial intention although entrepreneurial self-efficacy exists.

In this light, our study has several important implications for educators and policy makers. Since opportunity recognition mediates the self-efficacy-intention link and that there are gender differences it seems that male students are best served by teaching them how to recognize opportunities, e.g. by teaching them to creatively interpret their everyday environment or to be aware of future trends within their study (DeTienne and Chandler, 2007). Although this is important to female students as well their intention might be stimulated even more effectively by increasing their self-efficacy which contributes to both - opportunity recognition and intention creation. At this point, communicating successful role models female students could identify with seems to be a worthwhile approach. Enhancing
self-efficacy seems to be even more crucial since women’s entrepreneurial intention is less stimulated by recognized business opportunities compared to men.

Moreover, we found that women are open to successful role models which have a significant effect on their attitude towards entrepreneurship. Thereby, successful entrepreneurs within the family seem to be most important.

**Limitations and Future Research**

As an initial exploration of the relationship between opportunity recognition and entrepreneurial intention, the study naturally entails several limitations. Many of them constitute interesting points for future research.

First, we acknowledge limitations to our sample. Although our sample contains students from various subjects with different views on entrepreneurship

Second, it might be interesting to include further cognitive variables such as perception of risk. Furthermore, entrepreneurial opportunity recognition was measured with a focus on quantity. It will be promising to develop and employ measurements that combine quantitative as well as qualitative aspects of entrepreneurial opportunities. Furthermore, especially for educators it may be worthwhile to include different kinds of actual knowledge such as domain-specific knowledge and knowledge regarding business foundation (e.g., estimation of market potential, financial aspects, and openness to market and customer needs).
References


Small Business Entrepreneurs and the Challenge of Handling Taxation:
An Empirical Investigation with Practical Implications

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WORK IN PROGRESS presented at the ICSB World Conference 2010, Cincinnati, USA

Short Abstract: Nascent entrepreneurs after starting their business face multiple challenges. One is taxpaying. Entrepreneurs suddenly need to take care of taxpaying themselves, including the duty of implementing and running various tax relevant systems. Germany is known for one of the most complex legislations on taxation. In this explorative study, we try to identify the most challenging areas the field of taxation. Therefore we have questioned 56 tax consultants and eight tax inspectors. Descriptive results are presented. Entrepreneurs with no vocational training have more problems with taxpaying than all other educational groups. Migrant entrepreneurs do not face more difficulties than German entrepreneurs. Entrepreneurs in the gastronomy industry are most likely to get in conflict with tax legislation. Entrepreneurs need more advice on certain areas of taxpaying than on others. Detailed results will be displayed with the full paper.

Key words: entrepreneurship, entrepreneurs, difficulties with taxation, tax advisors, consultants, Germany.
Principal Topic and Introduction

Nascent entrepreneurs at the edge of starting their business face multiple challenges. One unpopular burden is the one of taxpaying. Different from what it was in their earlier occupational life (in regular employment), entrepreneurs suddenly need to take care of taxpaying themselves, including the duty of implementing and running various tax relevant systems: bookkeeping and drawing up balance sheets, calculating depreciations, paying taxes on wages, filing preliminary turnover tax return and declaring actual sales taxes to name just a few. Besides, some businesses require the design of an elaborated taxation model to avoid unnecessary taxations. Others apply for aid from the tax office, designed as governmental support for start-ups (e.g. virtual accelerated depreciation on future acquisition costs of tangible fixed assets or booking incorporation costs as an asset) – or fail to apply for such benefits. The area of potential wrong doing and mishaps ranges from filling in forms to more challenging tasks of managing taxation on a more strategic CFO-level.

Some entrepreneurs ask for advice from tax counselors during the planning process and have tax accountants and advisors ready to support them during the startup process and thereafter. However, especially small business start-ups often fail to pay sufficient attention to taxation and do not reach out for counselors’ tax advice in the first place. While mid-sized and large scale start-ups must frequently employ the services of chartered accountants and tax counselors, small business owners – who are not subject to such legal requirements – sometimes go for a “do it yourself”-approach, ending up in unprofessional mishaps.

The aim of our study is to reveal empirical information on such mishaps. What kinds of errors in the field of taxation occur frequently with small business start-ups? What kinds of mishaps are dangerous hazards for young companies? How many companies fail due to mishaps in the area of taxation? How many small business owners stick to the “do it yourself-approach”, how many get counseled during business planning and start-up process? Where do they get
information and advice from: online forums, official governmental web pages and citizens’ advice bureaus, or (costly) tax consultants? Does the lack of professional tax counseling necessarily result in mishaps? Are certain groups of entrepreneurs more likely to get involved in wrong doing than others, e.g. less educated individuals, or migrant and ethnic entrepreneurs?

**Method**

To address these research questions, in a first step we have studied discussions on the internet, monitoring relevant online forums and web based discussion boards. This approach generated first insides about what areas are addressed by entrepreneurs seeking for advice on the internet. In a second step we have conducted expert interviews with tax counselors and academics in the field of taxation. In addition we have analyzed information on taxation provided by official governmental web pages designed to support start-ups (www.existenzgruender.de). Based on the results of this exploratory approach, we have designed a questionnaire. After pre-testing, one questionnaire was distributed among tax counselors and tax inspectors. Thus, our empirical assessment on entrepreneurs’ mishaps in the area of taxpaying does not rely on entrepreneurs’ self-reporting.

Both questionnaires allow distinguishing the most frequent and the most dangerous mishaps. They also allow for tracking some potential influential factors, such as the entrepreneurs’ background (education, migration, ethnicity, age, experience, industry). The questionnaires were sent to a representative number of tax counselors and tax inspectors in a German county called “Bergisches Land”, an urban area with approx. 1 Million inhabitants. We received answers from 56 tax counselors and 10 tax officials. More than 50% of all counselors have advised more than 100 start-ups. Only 3% have dealt with less than 20 start-ups. We therefore assume that great knowledge and experience has accumulated in those individuals who answered to the questionnaire.
Results and Implications

As this paper reflects work in progress, it will basically focus on displaying descriptive results. The first diagram displays how frequently entrepreneurs seek for advice in certain areas of taxation. A four interval Likert scale was used to indicate frequency.

Diagram 1: How frequently do entrepreneurs search advice in the area of…. (see legend A to V)

To our surprise, consultations on how to interact and communicate with fiscal authorities was the most frequent issue for entrepreneurs. We asked to indicate areas in which entrepreneurs have done wrong before contacting a tax counselor. Results are displayed in Diagram 2. Not installing appropriate accounting systems, failing to issue correct invoices and a lack in proper start-up planning.
Diagram 2: In what areas do entrepreneurs make mistakes before contacting a tax counselor?

Not every mistake will lead to situation which put the new company on risk of further existence. Some mistakes can be corrected, but certain others may lead to serious situations. Not paying taxes of course can seriously harm a company, but also a lack of planning leading to unexpected costs, not declaring income statements, and a lack of accounting systems are among the most serious threats. We had an additional open question; consultants addressed a lack of entrepreneurial mindset, passion, and energy in some small business owners.

Diagram 3: In what areas are mistakes threatening the existence of the start-up?
If these results are compared with the answers of tax officials, it can be seen that tax officers indicated problems on a higher level. However, in general there estimation reassembles the shape of the spider web Diagram 3, just on a higher level, except for VAT, an area seen more critical by tax officials.

Diagram 4: Do tax consultants and tax officials have different perceptions of problematic areas?

70% of consultants believe that there are no distinct industries where entrepreneurs run into problems more frequently than in other areas. The other 30% named gastronomy and construction as the two industries where entrepreneurs run into problems with tax authorities more often. Tax officials agreed in 100% that certain industries or trades are more likely to get into conflict with taxation. They named gastronomy, construction, internet retailers, and car repair garages. To some surprise franchise start-ups were also mentioned.

The level of education is seen as an influential factor. The lower the education the more likely mistakes in handling taxations occur. Both, consultants and tax officials, reported this. While this result was expected, it was found that immigrant entrepreneurs are not reported by consultants to have problems in the area of taxation more often than non migrants. Tax officers have a different perspective; they pronounce that immigrant entrepreneurs have more problems to handle taxation.
A German governmental website (www.existenzgruender.de) gives advice to entrepreneurs. In a section that addresses taxation, the authors of the web site address certain areas. Tax consultants find these areas well chosen, except for inapt legal forms.

In an open comment section consultants pointed out that for many nascent entrepreneurs problems occur in their private life, because of all the unforeseen impact of such a movement, and that there is no support addressing such issues. It was commented that consulting a tax adviser may not make a company necessarily more successful, but at least it will open the entrepreneur’s eyes for problems that have not been recognized. Programs that encourage unqualified necessity entrepreneurs (in order to deal with the issue of unemployment) are blamed for an increase in problems with tax authorities. A lack of general business administrative knowledge and the need to run formalized procedures are addressed. Tax officers point out that most “entrepreneurs” who get into conflict with tax authorities execute only a small side business, so mistakes in taxation have no big impact and can be corrected easily.

**Discussion of results and implications**

Results address all interest groups of the ICSB World Conference: educators, researchers, practitioners, and policy makers. Educators and researchers gain insights from real world activities. In the area of teaching, especially German and Austrian educators find insights that can help to adjust contents of courses designed to practically educate small business entrepreneurs. Results seem to support our view that most courses are not designed in a “hands on manner” according to the empirically measured need for very basic and practical advice and lack of awareness. Academics will furthermore be provided with an empirical “point of origin” for further research. Practitioners are provided with check lists of areas
others have failed in. Results can help to avoid lacking awareness or replicating mishaps that have already occurred to others. Policy makers gain insights in how complicated tax systems occur to small business entrepreneurs, especially the less educated ones. From the viewpoint of policy makers, the tax system may seem to be inherently logical, well crafted, and very detailed serving a broad set of distinct cases individually, but it still (or outright therefore) overstrains many small business owners, especially less educated and inexperienced small entrepreneurs in the start-up stage. A less distinct case-based and detailed framework but more general rules to follow instead, a longer validity period of rules which have once been established, and a simpler approach in communication between taxpaying entrepreneurs and tax office are only three implications drawn from our results. It seems that simplicity could be the best way of governmental tax support for small business start-ups.

(A list of literature can be provided by the authors.)
Dynamic Capabilities to Manage Innovation Strategies in SMEs

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Abstract

In this paper we present a methodological approach aimed at analysing relationships between dynamic capabilities and innovation processes realized by SMEs. Starting from the concepts of dynamic capabilities developed by Teece et al. (1997) and the one of the antecedents developed by Borch and Madsen (2007), we analyze firm resources crucial for taking firms towards new innovation processes. We consider three types of dynamic capabilities: learning, coordination/integration and reconfiguration, and three types of antecedents, namely knowledge assets, organizational and managerial assets and position assets. Then, we tested the methodology in the course of case studies realized in the business area of Naples, Italy, and we drew the configuration of dynamic capabilities for each analyzed innovation trying to understand the evolution of resources activated by the entrepreneurs to take innovation processes.

1. Introduction

In the last few years many researchers have focused their attention on the problem of the definition and analysis of the capabilities of Small and Medium Enterprises (SMEs) for planning and undertaking successful innovations (Branzei, Vertinsky, 2006; Freel, 2005; Wiklund, Shepherd, 2005). Researchers highlighted that in SMEs, the innovative process starts from the entrepreneur’s perception of changes in the settings, as well as from the way in which, given such changes, it is possible to create opportunities for diversification of processes, products and markets.
According to resource-based theory, other researchers highlighted that innovation capabilities in SMEs are strictly connected to the kind and the amount of specific resources entrepreneurs are able to acquire, develop and manage in the course of a company’s lifetime (Amit, Shoemaker, 1993; Barney, 1991; Grant, 1991; Rumelt, 1984).

Recent theoretical developments suggest that innovation capabilities evolve over time, and several organizational and environmental levers contribute to their founding, development, maturation, and alteration (Helfat and Peteraf, 2003). Particularly, Dynamic capabilities can be defined as the ability to build, integrate and reconfigure both external and internal resources and routines (Eisenhardt and Martin, 2000; Teece et al., 1997; Zahra and George, 2002; Zahra et al., 2006).

Focus on dynamic capabilities is of special importance for entrepreneurial small firms. Zahara et al. (2006) claim that too little has been done until now to understand the types of organizational capabilities that are needed in pursuing new and innovative strategies within SMEs. In SMEs, entrepreneurs’ behaviors are acknowledged as some of the most critical antecedents of capability transformation: “unless the external selection environment is so constraining that it limits managers to only one possible option, different managers in different firms may make different choices” (Helfat and Peteraf, 2003: 1004). Empirical and theoretical evidence linking these aspects with innovativeness in small business is limited and mostly anecdotal. The question of whether or how firms select and maneuver bundles of strategic interventions to enhance their extant capabilities has remained unaddressed.

This study is aimed at examining which specific types of capabilities and resources sustain innovation processes in SMEs, and how such capabilities evolve over time as stated in the dynamic capabilities theory.

In particular, linking DCs to antecedents, the scope is to understand where is the locus of the antecedents to firm-level dynamic capabilities. We argue that, as a set, innovation processes are
sustain mainly by the entrepreneur especially in the first phase of the firm’s life. In the course of its life, the activation of extra resources and capabilities is needed where the firm aims at storing and increasing a competitive advantage, namely the activation of routines known as DC.

2. Methodological approach

Our methodological approach is founded on two main assumptions. One is the concept of dynamic capabilities (DC). The DC literature is concerned with how firms prepare for the exploitation of new opportunities in future markets. DC can be defined as those capabilities that help a firm revise their routines, mindset and action patterns to face turbulent environments (March, 1991). The availability of such capabilities may explain why some firms discover and exploit opportunities ahead of their competitors, thus achieving competitive advantage (Eisenhardt and Martin, 2000; Teece et al., 1997).

The second is the concept of antecedents, that can be defined as assets and capabilities that firm activate to reach the success in an innovation process. The activation of such antecedents will have an influence on a specific set of dynamic capabilities, thus the firm will acquire the ability to reproduce, in the course of the next innovation, the needed routines to innovate.

While important conceptual advancements have been made concerning the role of DC, empirical work in the area is scarce. So far research has not provided a compelling explanation for the ability of some new and established companies to continuously create, define, discover and exploit entrepreneurial opportunities (Zahara et al., 2006).

Based on Teece et al. (1997), Eisenhardt and Brown (1999) and Borch and Madsen (2007), we look at the antecedents of three type of DC: coordination and integration (of both internal and external activities), learning (seen as social and collective and defined as repetition and experimentation which enables tasks to be performed better and quicker), and reconfiguration and
transformation (of resources based on the ability to scan the environment to evaluate the markets and competitors).

2.1 Methodological steps

The aims of this explorative research were to help the entrepreneurs to reconstruct the history of the principal innovations undertaken by their firm and to bring to light the role that his capabilities and those of his collaborators, as well as the possible relationships of collaboration with subjects outside the enterprise, have had in the success of the innovation.

The ultimate goal was the identification of specific typologies of dynamic capabilities activated by entrepreneurs to develop and support the process of innovation, and the successful innovative behavior which, appropriately generalized, may act as a stimulus for entrepreneurs and their innovative behavior in other sectors.

To measure the dynamic capabilities, we considered the items reported in the hierarchical three as reported in the following table. We associated three set of assets (knowledge, managerial and organizational, and position assets), based on Teece et al., (1997) at each dynamic capabilities. Also we identified a list of antecedents to establish the relationship between each assets and the dynamic capabilities.

Table 1 – List of Antecedents to the Dynamic Capabilities

<table>
<thead>
<tr>
<th>Dynamic capabilities</th>
<th>Assets</th>
<th>Antecedents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>Knowledge assets</td>
<td>Entrepreneurs' business know how based on previous experiences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entrepreneurs' knowledge based on specialist training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entrepreneurs' strategic and business development skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employees' know how</td>
</tr>
<tr>
<td>Coordination and integration</td>
<td>Managerial and organizational assets</td>
<td>Frameworks to manage the business core processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Job descriptions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organizational structure design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modalities for internal communications</td>
</tr>
<tr>
<td>Reconfiguration</td>
<td>Position assets</td>
<td>Number of market</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality certification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specialized plants and equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Partnerships with research centers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reputational assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Partnerships with suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Partnerships with customers</td>
</tr>
</tbody>
</table>
The next step was the development of metrics to reveal and measure how the dynamic capabilities activated in the course of innovation process modified each antecedents in order to develop a new organizational routines. Next table provide for a list of eligible metrics.

### Table 2 – List of metrics

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTREPRENEURS’ BUSINESS KNOW HOW</td>
<td></td>
</tr>
<tr>
<td>BASED ON PREVIOUS EXPERIENCES</td>
<td>Experiences in a specific business area</td>
</tr>
<tr>
<td>ENTREPRENEURS’ KNOWLEDGE, BASED ON</td>
<td></td>
</tr>
<tr>
<td>SPECIALIST TRAINING</td>
<td>Knowledge in the innovation management area</td>
</tr>
<tr>
<td>ENTREPRENEURS’ STRATEGIC AND</td>
<td>Application of specific tool for the daily activities management</td>
</tr>
<tr>
<td>BUSINESS DEVELOPMENT SKILLS</td>
<td>Application of specific tool for the innovation management activities</td>
</tr>
<tr>
<td>EMPLOYEES’ KNOW HOW</td>
<td>Experiences in a specific business area</td>
</tr>
<tr>
<td>CORE PROCESSES</td>
<td></td>
</tr>
<tr>
<td>FRAMEWORKS TO MANAGE THE BUSINESS</td>
<td>50% of the core processes are normally managed</td>
</tr>
<tr>
<td>JOB DESCRIPTIONS</td>
<td>All the core processes are formally managed</td>
</tr>
<tr>
<td>ORGANIZATIONAL STRUCTURE DESIGN</td>
<td>For all the position, and well fitting with the innovation goals</td>
</tr>
<tr>
<td>MODALITIES FOR INTERNAL</td>
<td>For the whole organization, and well fitting with the innovation goals</td>
</tr>
<tr>
<td>COMMUNICATIONS</td>
<td>communication; and well fitting with the innovation goals</td>
</tr>
<tr>
<td>NUMBER OF MARKET</td>
<td></td>
</tr>
<tr>
<td>PATENTS</td>
<td></td>
</tr>
<tr>
<td>QUALITY CERTIFICATION</td>
<td></td>
</tr>
<tr>
<td>SPECIALIZED PLANTS AND EQUIPMENT</td>
<td></td>
</tr>
<tr>
<td>PARTNERSHIPS WITH RESEARCH CENTERS</td>
<td></td>
</tr>
<tr>
<td>REPUTATIONAL ASSETS</td>
<td></td>
</tr>
<tr>
<td>PARTNERSHIPS WITH SUPPLIERS</td>
<td></td>
</tr>
<tr>
<td>PARTNERSHIPS WITH CUSTOMERS</td>
<td></td>
</tr>
</tbody>
</table>

2.2 Methodological set

The exploratory nature of this study suggests the use of a qualitative methodological approach. Thus case study is a useful tool to understand the complex nature of entrepreneurship, as recommended by Gartner and Birley (2002). Aim of each case study was to understand, for each innovation processes, the impact of the antecedents on the activation of a specific DC.
The cases are based on semi-structured interviews with entrepreneurs. Starting from their personal story and career, the interview covered the following topics: story of the firm or previous work experience, products, market, innovation activities, internal organization, analysis of annual reports, website and other information available onto the web site.

A single case study for every enterprise has been developed by the researcher, in order to summarize and better fix the interviews and the entrepreneur words. A feedback mechanism has been used: every single case has been read, rectified or amended by the people who has been interviewed. Furthermore when cases are retrospective and interview based, there are many method issues that fundamentally threaten the validity of the findings come to the fore. We will not deal with the direct observation of behaviors, but their retrospective self reports. These reports are subject to memory decay, hindsight bias/rationalization after the fact and social desiderability problems (Davidsson, 2008). Cognitive psychology suggests that memory is constructive in nature (Anderson, 1990). The respondent of a survey or of an interview can be honest and careful, but it is likely that during the years he distort the image of what happened during the start-up process or during the particular temporal moments considered by the interviewer. This problem is remedied through triangulation (other informants, written documentation, secondary data, past reports, analysis of balance sheets and business plans).

3. Preliminary results

Since this paper is presenting a work in progress, only few results of the research will be presented in the following sections. As the interviews with the entrepreneurs have been realized, the analysis based on the methodological approach is still in development. For all these reasons, in the following section we will present the characteristics of the case studies, and some preliminary results based on the interviews. In particular, we will try to understand, based on the story told by all the entrepreneurs, which kind of specific DCs had been activated in the course of each
innovation process analyzed in the course of the firm’s history, and then we tried to relate such capabilities to a specific set of organizational routines.

Further development of the research will then provide the link between the DCs and the antecedents, in order to relate the nature of the activated antecedents and the DCs that enabled the innovation.

3.1 The case studies

The data was gathered within a list of innovative firms in the Campania Region, in Italy. Then, we selected the firms on the basis on the following criteria:

- undertaking of radical innovations involving significant changes in the performance of products and processes with respect to what was offered by competitors, and which resulted into substantial improvements in the company’s competitiveness;
- absence of resources exclusively devoted to research and innovation;
- entrepreneur’s orientation towards innovation;
- relations (also at informal level) with possible sources of external knowledge and orientation to interact with them;
- the family firm is at least at the second generation of entrepreneurs
- time to devote to the interview.

The following table provides a summary of the enterprises according to: their dimension; their average turnover in the last three years; the sector in which they operate; the territorial catchment area of their user base; the modality through which they relate to the external market (clients and suppliers); and the geographical market of reference.
Table 3 - Summary of Case Studies

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Dimensions</th>
<th>Average turnover</th>
<th>Sector</th>
<th>Relation with clients and suppliers</th>
<th>Geographical market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company One</td>
<td>About 30 employees</td>
<td>About 1 million €</td>
<td>Car body shop</td>
<td>Caserta and its province. Direct relation with clients and suppliers</td>
<td>Province of Caserta</td>
</tr>
<tr>
<td>Company Two</td>
<td>About 24 employees</td>
<td>About 3 million €</td>
<td>Bar apparatus/machinery</td>
<td>Direct market, without intermediaries</td>
<td>Italy and Abroad</td>
</tr>
<tr>
<td>Company Three</td>
<td>About 70 employees</td>
<td>About 30 million €</td>
<td>Foodstuffs</td>
<td>Direct relation with clients and suppliers</td>
<td>Region of Campania</td>
</tr>
</tbody>
</table>

For each case study, we realized an in depth interview with the entrepreneurs. The interview was aimed at revealing the main innovation processes realized in the last fifteen years, and we tried to re-built which specific routines were activated to enable the realization of the innovation. For this reason, for each case study, we will report the main innovations (both product/service and process innovation) realized by the firm, and the preliminary results where we tried to relate the DCs to specific typologies of organizational routines.

3.2 Case study 1

This company was started up in 1968 as a family run garage with a few employees organised on the model of the Ford production line: each employee was assigned to a specific production process. Today the Company has more than thirty employees and a total surface of about 10,000 m², and an average annual turnover of 1 million Euros.

The innovations analyzed in the case study are the three concerned as to be the most significant realized by the interviewed entrepreneur (who is the second generation in the firm). We associated those routines to a specific dynamic capability as shown in the following table:
Table 4 - Main Innovations of Company Two

<table>
<thead>
<tr>
<th>Typology of innovation</th>
<th>Description of the intervention</th>
<th>Year</th>
<th>Routines</th>
<th>DC</th>
</tr>
</thead>
</table>
| Process/product innovation | Water-based painting solution    | 1999 | Customers’ needs analysis  
Customers/supplier relationship management  
Training  
Renewal of Job description | Learning  
Coordination/integration |
| Process innovation    | Quality Certification           | 2002 | Process re-configuration  
Resource allocation routines  
Knowledge creation routines  
TQM implementation  
Management of internal communication | Coordination/integration  
Reconfiguration |
| Process innovation    | Multi-service center            | 2006 | Customers/suppliers relationship management  
Resource allocations routines  
Internal communication management  
Process re-configuration | Coordination/integration  
Reconfiguration |

The water-based painting technique innovation was implemented few years before the enforcement of the law on car paints which made the use of water-based solutions mandatory. The knowledge and the expertise gained by the entrepreneur, especially following trips abroad, represented a fundamental aspect in the acquisition of this innovation. It was extremely important to activate managerial and organisational assets so as to guarantee the introduction of a new and technologically evolved process like water-based painting. The activation of contacts with the suppliers was of great importance for the success of the innovation, in that this guaranteed training in the use of new machinery for colour painting of cars.

The quality certification approach was followed in the twenty’s although several small car body shop didn’t found interesting and profitable the solution of a certification. But the entrepreneur strongly believed that the certification was a crucial way to increase the level of quality of the service, and the ideal occasion to renew the whole organization of the factory.

With reference to the multi-service centre development, the entrepreneur’s capabilities were once again fundamental as he was able to interpret in advance the evolution trends within the sector. These trends moved towards concentrating within a single structure different processes connected to the
world of motorcars (from repair estimates for insurance, to painting and mechanical repairs, from breakdown assistance to trade agreements with important car manufacturers). In the expansion process of the productive activity, the constant growth of internal professional competencies also enabled to expand the range of products offered by the enterprise to services that were collateral to the repair of vehicles.

3.3 Case study 2

This is a company that operates in the sector of crushed-ice machines and cold drinks vending machines. Founded in the 1960s, today it has a total of 25 employees and an average turnover of about 3 million Euros. Its production is aimed at a prevalently Italian market (about 80% of the production), while distribution abroad mainly targets EU countries and North America. The innovations analyzed in the case study are the three concerned as to be the most significant realized by the interviewed entrepreneur (who is the second generation in the firm). We associated those routines to a specific dynamic capability as shown in the following table:

Table 5 - Main Innovations of Company Two

<table>
<thead>
<tr>
<th>Typology of innovation</th>
<th>Description of the intervention</th>
<th>Year</th>
<th>Routines</th>
<th>DC</th>
</tr>
</thead>
</table>
| Product innovation     | Crushed-ice maker with microprocessors | 1996 | Product development routines  
Customers’ needs analysis  
Customers’ relationships analysis  
Customers/supplier relationship management | Learning |
| Process innovation     | Implementation of the lean production | 2004 | Process re-configuration  
Resource allocation routines  
Knowledge creation routines  
TQM implementation  
Management of internal communication | Coordination/integration  
Reconfiguration |
| Product innovation     | High volume capacity crushed-ice maker | 2006 | Customers/suppliers relationship management  
Product management routines  
Customers’ needs analysis | Learning  
Coordination/integration  
Reconfiguration |
The first innovation analyzed in the history of the Company was realized in 1996, with the development of the first crushed-ice maker with microprocessors. The 1996 crushed-ice maker with microprocessors was the first ice-maker with a high technological content. The entrepreneur’s training encompassed a basic knowledge of electronics, which gave him a clear understanding of the possible use of this technology in the sector of ice-makers. Also due to the commitment of the planning department, 3D design and all the computer design techniques in use today were successfully introduced into the company. The innovation was introduced in a gradual way into the market so as to reduce the risk of wasting a valid, but in any case innovative, product. Besides, a planning process was forming and the development times became notably shorter, from 5 to 2 years. The strong links with the suppliers enabled to finalize a product with a high electronic content.

In 2004, following the philosophy of the well-known Toyota way, the entrepreneur decided to adopt some interesting concept of this business approach starting from the introduction of a lean production, ending with the so called “kaizen week”, where all the employees meet each other to talk about problem and ideas.

With reference to the last innovation (high volume crushed-ice maker, 2006), the organisation and rationalisation of the planning process proved fundamental and was guaranteed by the competencies and the know-how developed by the entrepreneur. In this case, the impulse towards innovation came from an idea of a client, who had expressed a specific need to the Company. Therefore the client was the principal source of this innovation. Lastly, with the support of the new software, business procedures and the work of collaborators, in twelve months the project was designed and a prototype was completed and manufactured.
3.4 Case study 3

The origin of the Company Three may be traced to the end of the 19th century, to the start of a flourishing company which has now reached production levels able to turnover an average of 30 million Euros per annum. The company, with a current organisational structure of about 70 employees, operates in the production of condiments and seasoning products that are mainly exported. The innovations which have been examined with the entrepreneurs, and which shall be analysed in the following sections, are as follows:

Table 6 - Main Innovations of Company Three

<table>
<thead>
<tr>
<th>Typology of innovation</th>
<th>Description of the intervention</th>
<th>Year</th>
<th>Routines</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process innovation</td>
<td>Introduction and implementation of Quality Control Systems</td>
<td>1995</td>
<td>Process re-configuration, Resource allocation routines, Knowledge creation routines, TQM implementation, Management of internal communication</td>
<td>Coordination/integration, Reconfiguration</td>
</tr>
<tr>
<td>Service innovation</td>
<td>Olfactometer</td>
<td>2003</td>
<td>Knowledge creation routines, Development of a project in collaboration with research centre, Customers’ needs analysis</td>
<td>Coordination/integration, Reconfiguration, Learning</td>
</tr>
<tr>
<td>Product innovation</td>
<td>Development of an innovative product</td>
<td>2005</td>
<td>Customers’ needs analysis, Product development routines, Process re-configuration, Suppliers relationship management</td>
<td>Coordination/integration, Reconfiguration, Learning</td>
</tr>
</tbody>
</table>

The intention and will of the entrepreneurial group to uniform internal procedures and formalise the control systems in order to improve the quality of the products and services, as well as the availability to make investments, the attention towards clients’ requests and the capacity to motivate their collaborators, brought about the certification of the production process of the Company in 1995. The introduction of this certification undoubtedly represents an innovative aspect. In this respect, the willingness of the collaborators to learn the procedures of the Quality Control System led to the certification in a brief time. The capacity for redesigning the internal procedures and formalising the control systems to make them more compliant with the Quality Control System also represented critical elements for the realisation of this innovation.
In 2003, the Entrepreneurial Group understood the importance of offering a product whose characteristics could be objectively identified by means of scientific analysis. They managed to identify research centres having the right competencies for undertaking the project, in that a strong phase of scientific research was required to identify the organoleptic features of the product. The ability to realise an olfactometer within a shorter time span and at lower costs vis-à-vis the initial plans was due to the high project management skills. The suggestions provided by sales personnel and personnel of the Research and Development Centre of the company to the entrepreneurial group were critical in the project phase for experimentation of the system. In this phase, the collaboration with the Universities and the Research Centres proved effective.

The last innovation to be examined is the launch of a new product on the market. The entrepreneurial group worked to explore and create new possibilities to differentiate the products and make it more ‘attractive’ to different target consumers. Through extensive market analyses, a new product was designed. The flexibility of the personnel to rapidly adjust to the new production process, the capacity to coordinate an in-depth study of the different packaging methods of the new product (working in close contact with the suppliers), the ability to finalize the new product in 12 months as well as the realisation of new commercial and marketing policies guaranteed the success of this innovation.

4. Preliminary Discussion and Conclusions

The present study is one of the first attempts to explore the relationship between dynamic capabilities and entrepreneurial resources activated as antecedents of the DCs. In this paper we presented some preliminary results based on three case studies. Currently, we are further analyzing the results of those three interviews, and we are ending two extra case studies.

Preliminary results show how the continuity of innovation processes in SMEs is strictly related to the ability of the entrepreneur in activating a specific set of assets as antecedents of DCs. And
that in all the firms analyzed, all the entrepreneurs were able to activate specific routines to realize both process and product innovations.

If we look at the current situation, the firm shows emphasis on dynamic capabilities as routines and processes usually activated when approaching to a new innovation challenge. This means that entrepreneurs, in the course of the life-cycle of the firms, have been able to acquire and take care of different sets of resources that actually can be translated in DC.

This study also highlighted the linkage between some antecedents and specific dynamic capabilities. By extending the analysis to a wider set of firms, our final aim is to link a set of antecedents impacting a specific dynamic capabilities to a typology of innovation (product innovation, process innovation, etc…), in order to realize strategic decision making tool to help entrepreneur in the realization of innovation processes.
References

Future of Daedok Innopolis as a Global Science City in Northeast Asia

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1. Introduction

Regarding the statistics of the International Association of Science Parks (IASP) in 2009, there are over 1,500 science parks in the world. Among these, over 70% of science parks are operating in advanced industrialized nations. In fact, it is a truly difficult task to become a successful science parks model. The reasons for it are as follows. Firstly, research has shown that it takes much longer time than expected and secondly, due to the various indigenous and external factor influences.

At the same time, newly industrialized countries (NICs) are aggressively building their high-tech oriented clusters, which are linked to strategies for national and regional technology development (Park, 2000a). This global trend has become stronger than ever with emerging a new global economic order that underlines the significance of a technology development capacity.

As one of many NICs, South Korean industries have developed most rapidly in the last thirty years. As the result, it became a major power in electronics manufacturing and some areas of information technology (Wakabayashi & Sumita, 1993). South Korea has continuously upgraded its technological foundation as well as the quality of its technical and engineering work forces. This successful story is based on providing necessary government support for industrial and communications infrastructure, labour training, credit and trade policy on the one hand and strong willing of South Korean companies to increase their competitiveness in the world.
market on the other (Bloom, 1993). At present, however, all of the industrial sectors suffer from a global financial crisis and a restructuring process that stems from unstable and exceeded short-term bank loans as well as sluggish global demands although South Korean economic situation seems to be relatively better than any other industrialized nations.

In order to strengthen its technology policy, the government established the Ministry of Science and Technology (MOST) in 1967 that was responsible for coordinating the technology programs of different ministries. However, this task cannot be carried out properly due to conflicts between ministries. Hence, the National Council for Science and Technology was established in 1973. In the council, the Prime Minister became the chairman and MOST served as the secretariat. This council developed into a new and more powerful institution under the chairmanship of the President of the Republic in 1982. It was named as the National Technology Promotion council, comprising of about 200 members including high-level officials, industrialists, and scientists (Park, 2000b). The council dealt with the implementation of the technology policy and played a critical role for technological development in South Korea (Castells, 1994).

The technology policy focused on targeted fields, which contributed to national economic development and at the same time Chaebol, conglomerate oriented economic policy based on heavy and chemical industries, which caused a severe regional imbalance in the territory. The government realized the need for regional decentralization and the upgrading of the industrial structure pursuing technological transference from imported technology to developing nation's own technology. For a symbolic value of national R & D facilities contributing to regional development as well as to upgrading national technology standards, former president Park Chung Hee
decided on building a new science town in central South Korea in 1973 (Park, 2000c). Since then Daedok Innopolis has developed in several phases.

This paper focuses on the performance of Daedok Innopolis (DI) based on R & D activity, technology innovation and future-oriented strategy. This also argues strategic point of views regarding why DI has been created and developed. Additionally, an input and output analysis based on the amount of capital investment and the number of patents is adopted in order to assess the results of DI.

2. Theoretical Debate on Innovation Theory and Regional Innovation System

Technology innovation impacts significantly on national and regional economic development. It is also safe to say that technology innovation contributes to further technology diffusion as well as technology change (OECD, 2000). Technology innovation is related with the processes of technological change, which consist of invention, innovation, and diffusion.

Regarding the accumulation of technical knowledge, Dosi (1982) already urged that the knowledge leads to the formation of a path of possible technical developments. Furthermore, the cumulative nature of the technological process narrows down the range of potential choices that is regarded as the evolution of the technology proceeds. David (1985) characterized this as the path dependency theory embodying strong prescriptions about which technological change should be pursued and which should be neglected. Where the cumulative nature of the process of technological development involves the narrowing of ranges of potential choices, national trajectories enable differentiation and diversification from the main development path (OECD 1992). However, Schienstock and Hämäläinen (2001) argue that a risk of path dependency exists when a specific development path in an
economy exhausts itself. This is indicated by a loss of competitiveness, retarding economic growth, and increasing unemployment. Therefore, Grabher (1993) and Schienstock (1997) insist that such a lock-in phenomenon suggests paying more attention to the aspect of path creation.

In fact, Schumpeter (1942) already stressed that innovation implies breaking out of the traditional path of technological development, which is regarded as the process of creative destruction. He urged the will of the entrepreneur as decisive for the creation of a new development path. As such, a theory of path creation can provide a way of understanding how entrepreneurs escape a lock-in situation. Garud and Karnoe (2000) explain that path creation is interpreted as a process of transforming a technological field in which different actors with different frames are cooperating. In the transformation process, the entrepreneur plays a main role as a stimulator and coordinator at a business level.

According to the path-creation perspective, all economic actors are regarded as knowledgeable agents with a capacity to react in ways other than those prescribed by the existing social rules and technological artifacts. However, David (2000) argues that a new path-creating innovation needs the development and coordination of a vast array of complementary elements that include new management techniques, new organization forms, new kind of workforce skills, new infrastructure, government policies, public organizations etc.

Path creation processes require the importance of trial and error. Stable processes of path creation and diffusion can generate positive results if all actors of an innovation system cooperate, review each other’s change processes and finally adapt to them. In addition, continuous exchange of information and knowledge in dialogues and multilogues is required for stabilizing a new development path. In this regard,
Schienstock (1996) explained that the government plays a key role in the path creation process. Furthermore, path creation also needs new forms of coordinating and various innovation activities such as vision creation and discursive coordination.

Schienstock (2007a) identify five factors that explain the emergence of a new techno-organizational development path. These are a window of new opportunities opened up by a new knowledge paradigm, a market promising long term profits, economic pressures to adapt to the new paradigm, change events that trigger and support the transformation process as well as courses of action that steer techno-economic development into a new direction and introduction of techno-organizational and institutional changes.

Concerning the technological aspect, the functions of the information and communication technology (ICT) represent a fundamental change even for new comers, while the network model focusing on intra- and inter-organizational knowledge flows can be regarded as a new logic of organizing businesses more effectively in the organizational aspect. This is a new techno-organizational trajectory in the globalization era. Bassanini and Dosi (2001) explain that by understanding the new trajectory it is not wise to focus only on objective factors such as new opportunities, economic pressures, change events etc. Instead of the objective factors it is also important to emphasize human will. The reason for it is that path creation is regarded as a process of cautious deviation by people understanding the opportunities that the new paradigm offers.

Accordingly, Schienstock (2007a) urges that the transformation process to a great extent use to be dependent on the engagement of social pioneers such as scientists, politicians and entrepreneurs who prepared to initiate and conduct anticipatory institutional change. Moreover, Teubal (1998) also stress that it is important to re-
establish a good match between the new techno-organizational paradigm and the institutions that facilitate its full deployment through the economy by unleashing a multitude of social and institutional innovations.

Additionally, Schienstock (2007b) distinguishes a theory of socio-economic development between evolutionary phases of path dependence and revolutionary phases of path creation. This means that the systemic benefits and historical success of the old business system can become a structural burden in rapidly changing environment. Therefore, local policy makers to create paths in new industries need to focus on long term success. Otherwise region’s transformation based on path creation may fail.

In line with path dependency and creation theory Chesbrough (2003a) develops closed and open innovation theories that are based on firm level. The paradigm of closed innovation uses to be said that successful innovation requires control for new product development cycle inside the company. By contrary the paradigm of open innovation is regarded that firms should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.

The paradigm of closed innovation had been eroded by the following four factors: increasing availability and mobility of skilled workers, growth of the venture capital market, external options for ideas and increasing capability of external suppliers. These factors have resulted in a new market of knowledge that resides in employees, suppliers, customers, competitors, universities etc. Under this circumstance other companies will use it if a company does not use the knowledge created. Chesbrough (2003b) explains this phenomenon that innovation has shifted from being closed to
being open. In sum, it seems to be a theoretical discursive relation between the closed and open innovation theory and the path dependency and creation theory. The current paper is based on the path creation theory and focuses on whether this theory can be applied to the South Korean approach to transform the existing science city into the innovative cluster or not. In fact, the path creation theory is a creation of the western context that results from a strong collaboration between innovative actors as well as initiatives of private sector to a high extent. By contrary, South Korea as one of the Northeast Asian countries mainly led by the central government is in a weak position that innovative actors can create their own innovative environment by themselves without a strong intervention of the central government. Therefore, it is rather natural that an academic research curiosity is caused by such a contextual difference.


3.1. Background

In December 1973, a master plan for Daedok Science Town (DST) construction was approved and a construction of basic facilities and institutes started in 1974. Moreover, Daedok Industrial Base Development Area was announced in 1977. By the end of 1978, the four institutes moved to the Science Town that was a relocation of government research institutes from Seoul.

Additionally, MOST opened its management office, and the basic planning of Daedok Industrial Base Development was also announced in the beginning of the 1980s. As the result, the west section of the Science Town was completed in 1985. It was the first stage of the project. In the second stage of the project, a land construction by a public development system was introduced. Finally, the basic construction for Daedeok Science Town was completed in 1992 and a year later, the Daedeok Science
Town Act was passed (Castells & Hall, 1994). Moreover, the former government revised the act to the Daedeok Science Town Special Zone Act in the end of 2004. Since Jan. 2005 Deadeok Science Town special Zone has been redesigned as Deadeok Innopolis.

Daedeok Science Town is located in Daejeon City, sixth largest city in South Korea and a transportation network hub located 170 kilometres south of Seoul. Originally, it covered 1,134 acres, of which 46 percent was for institutions for research and education, 7 percent for residence and community services, and the rest was for greenery. However, it has been enlarged up to 6,680 acres. The land is shared for three different functions by 47 percent, 9 percent and 44 percent respectively. People can reach there from Seoul in about two hours by car and in about 50 minutes by "KTX", Korean version fast train.

In 2009, 18,796 South Korea's leading researchers and engineers are working on R & D activities. The total residential population has reached 83,202 among who 40,338 are employees in R & D units, R & D support organizations. For them, about 16,000 housing units have been constructed. The numbers of in-town organizations have reached 977 institutes including private firms. (See fig. 1)

3.2. The Roles of High-Tech Oriented Private Research Institutes and Venture Businesses in Daedeok Innopolis

In Daedeok Innopolis, there are 977 institutes. Among these, 28 private research institutes and 898 venture businesses are operating. Although the private research institutes and venture businesses account for over 94 percent of the total institute numbers, its man powers is lower than in the national research institutes.
Among the 28 private research institutes, there are 4 research institutes with less than 30 employees and 10 research institutes with less than 100 employees. By contrary, the numbers of large sized research institutes with more than 100 employees account for 15 institutes. However, most of venture businesses have less than 30 employees (www.dasto.or.kr).

In terms of patent enrolments, the national and private research institutes have been very active. In a domestic patent enrolment, the private research institutes compete with the national research institutes strongly. However, the national research institutes are superior to the private research institutes in an international patent enrolment. The patent regardless domestic or international has been one of major driving forces in Daedock Innopolis because it can contribute to strengthening DI’s competitiveness as well as bridging commercialization. As a result, the total number of patents had increased rapidly since 1995. (See fig. 1) Periodically it is worth noting that the private research institutes applied for the industrial patent more than the national research institutes until 2002. (See table 1, 2, 3) Additionally, the private research institutes increased the ratio of patent enrolment continuously. Overall, the private research institute is overwhelmed in the domestic patents, while the national research institute is strong in the international patents in terms of patent pending as well as patent registration based on the accumulated calculation until the end of 2008. (See fig. 2)
Figure 1: Annual Number of Patent in Daedeok Innopolis (1995-2007)

Source: Daedeok Innopolis, 2009, Internal Statistical Materials

Table 1: Domestic Industrial Patents of the Private Research Institutes

<table>
<thead>
<tr>
<th>Results</th>
<th>1995</th>
<th>1996</th>
<th>1997</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied (A)</td>
<td>559</td>
<td>567</td>
<td>635</td>
<td>5,860</td>
</tr>
<tr>
<td>Enrolled (B)</td>
<td>111</td>
<td>117</td>
<td>239</td>
<td>2,858</td>
</tr>
<tr>
<td>B/A (%)</td>
<td>19.0</td>
<td>20.6</td>
<td>37.5</td>
<td>48.8</td>
</tr>
</tbody>
</table>


Table 2: Domestic Industrial Patents of the National Research Institutes

<table>
<thead>
<tr>
<th>Results</th>
<th>1995</th>
<th>1996</th>
<th>1997</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied (A)</td>
<td>556</td>
<td>515</td>
<td>741</td>
<td>1,587</td>
</tr>
<tr>
<td>Enrolled (B)</td>
<td>186</td>
<td>209</td>
<td>507</td>
<td>772</td>
</tr>
<tr>
<td>B/A</td>
<td>33.5</td>
<td>40.6</td>
<td>68.4</td>
<td>48.6</td>
</tr>
</tbody>
</table>

Table 3: Accumulated Number of Patents in Daedeok Innopolis (As of Dec. 2008)

<table>
<thead>
<tr>
<th></th>
<th>Domestic patent (accumulated)</th>
<th>International patent (accumulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pending</td>
<td>Registered</td>
</tr>
<tr>
<td>Private research institutes</td>
<td>27,760</td>
<td>19,061</td>
</tr>
<tr>
<td>National research institutes</td>
<td>4,718</td>
<td>2,628</td>
</tr>
</tbody>
</table>

Source: Daedeok Innopolis, 2009, Internal Statistical Materials

As such, activities of both institutes have increased continuously. In the ratio of patent enrolments, the national research institutes show a higher efficiency than the private ones in the domestic patent. This indicates that the former focus on stable and long term oriented research activities for the national interests, whereas the latter concentrate on target oriented research activities for the company's interests.

In addition, the private research institutes have performed less active in an international patent enrolment than the national research institutes. It indicates that the former has concentrated on the domestic patents strategically, whereas the latter has attempted to increase its domestic and international patent enrolments at the same time. (See table. 4, 5)

Table 4: International Industrial Patents of the Private Research Institutes

<table>
<thead>
<tr>
<th>Results</th>
<th>1995</th>
<th>1996</th>
<th>1997</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied (A)</td>
<td>54</td>
<td>44</td>
<td>35</td>
<td>987</td>
</tr>
<tr>
<td>Enrolled (B)</td>
<td>35</td>
<td>33</td>
<td>15</td>
<td>412</td>
</tr>
<tr>
<td>B/A (%)</td>
<td>64.8</td>
<td>75.0</td>
<td>42.9</td>
<td>41.7</td>
</tr>
</tbody>
</table>

Table 5: International Industrial Patents of the National Research Institutes

<table>
<thead>
<tr>
<th>Results</th>
<th>1995</th>
<th>1996</th>
<th>1997</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied (A)</td>
<td>263</td>
<td>215</td>
<td>227</td>
<td>773</td>
</tr>
<tr>
<td>Enrolled (B)</td>
<td>106</td>
<td>96</td>
<td>126</td>
<td>286</td>
</tr>
<tr>
<td>B/A (%)</td>
<td>40.3</td>
<td>44.7</td>
<td>55.5</td>
<td>37.0</td>
</tr>
</tbody>
</table>


The reason for it is very clear. The private research institutes must focus their research activity on specific areas in order to improve their production technologies directly that can generate a substituted effect of technology imports. By contrary, the national research institutes aim to upgrade a technological capacity for the nation as well as to compete with advanced industrialized nations in specific research areas, such as information and communications technologies.

Even in the ratio of international industrial patents enrolment, the national research institutes show a stable and continuous increase, whereas the private research institutes pose an extreme fluctuation. However, this view has changed since the financial crisis occurred in the end of 1997. After a restructuring period, the private research institutes increased their R & D activity and carried out successful results in achieving patents not only in domestic but also international patents.

The R & D activity of venture businesses is also strong in spite of their short business activities. Venture businesses started in 1993 around Daedeok Science Town. However, these businesses were not able to be located within the park due to the Law for Daedeok Science Town Management that resulted in weak spin off effects between R & D and manufacturing. Therefore, the government changed this law in 1999 in order to bring venture businesses within the park. Additionally, Daejeon city government started to build four industrial parks around Daedeok Innopolis in order to link the function of R & D and the production function that
enabled to spin-off effects for new venture businesses. As a result, venture businesses could receive 169 domestic patents and 23 international patents in 2002. Moreover, the number of venture businesses increased dramatically up to 898 in 2007 that resulted in 815 cases of technology transfers as well as 77,798 million won (c.a. 89 million US dollars) technology fees. The technology transfers and transfer fees had increased from 2005 to 2007 in a row. (See table 6, fig. 2)

Figure 2: Accumulated numbers of technology transfer and technology fee (2005-2007)

<table>
<thead>
<tr>
<th>Results</th>
<th>Domestic Patents</th>
<th>International Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied (A)</td>
<td>425</td>
<td>143</td>
</tr>
<tr>
<td>Enrolled (B)</td>
<td>169</td>
<td>23</td>
</tr>
<tr>
<td>B/A (%)</td>
<td>39.8</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Table 6: Industrial Patents of Venture Businesses (As of 2002)

Source: Daedeok Innopolis, 2009, Internal Statistical Materials

Overall, DI has expanded rapidly in terms of its total output. In the end of 2005, the output in DI reached 2.56 trillion won and increased up to 11.2 trillion won in the end of 2008. The reason for the rapid increase is not only based on new venture businesses but also based on enlarging industrial areas including industrial sites of number 1 to 4. As a result, DI is able to create a comprehensive composition as an innovative cluster from R & D to production activities. (See fig. 3)

**Figure 3: Output of Daedeok Innopolis (2005-2008) (Mil. Won)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Output (Mil. Won)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2563893</td>
</tr>
<tr>
<td>2006</td>
<td>6706454</td>
</tr>
<tr>
<td>2007</td>
<td>9928319</td>
</tr>
<tr>
<td>2008</td>
<td>11237907</td>
</tr>
</tbody>
</table>

Source: Daedeok Innopolis, 2009, Internal Statistical Materials

### 3.2. A Habitat of Daedeok Innopolis

The main actors of Daedeok Innopolis are national and private research institutes as well as universities. Additionally, venture businesses take part in R & D activity and manufacturing strongly. However, these actors seem to have limited power to act as independent actors. The reason for it is that the national research institutes and universities are controlled by the central government, while the private research
institutes have to adopt a centralized R & D policy carried out by their headquarters. Only venture businesses obtain their R & D activities relatively free. However, these are mainly small sized and heavily dependent on venture capital. The local government built four industrial parks in order to create spin off effects. (See fig. 4) The main role of these industrial parks is to link R & D results in Daedeok Innopolis with local industries. This means that industrial parks play a role in commercialisation of R & D results as soon as possible.

As the result, Deadeok Innopolis has completed its habitat from a R & D hub function to a production function. It may be safe to say that a core function as an innovative cluster has been fully completed.

**Figure 4: A Habitat of Daedeok Science Town**

![Diagram of the habitat of Daedeok Science Town]

Source: Author’s own adaptation

### 3.3. Problem Analysis and Future Perspectives of Daedeok Innopolis

Daedeok Innopolis (DI) is mainly controlled by the central government particularly, the Ministry of Knowledge and Economy (MOKE). The host city Daejeon is only
responsible for building and maintaining access roads to DI. Besides, it is also in charge of providing and managing water and sewage services. As implied, DI has no local autonomy, and the Administration Office of DI is only carrying out its managerial functions.

In addition, the entire complex had no manufacturing activity as well as few connections between the research activities in DI and the productive activities in Daejeon until recently that has resulted in a poor local synergy. A main reason for the poor local synergy may be that most of the institutes and its agencies usually have a strong tendency to focus on national priorities in R & D activities instead of private company interests.

It must be also pointed out that most of the institutes seem to be pushed by the government to move in DI since the research programs are composed of various fields from Ginseng and Tobacco Research to Ocean Engineering. It indicates that a scientific plan to generate synergies between institutions has not been a priority for the government. Hence, it is clear that DI is a result of the government-led project to establish R & D centers, which could contribute to the improvement of technology standards and to the Koreanization of certain strategic high technologies.

DI is an entirely artificial creation. Nothing was in that area before the government started to build the town. With the beginning of the second stage of development in 1987, the government realized that without developing synergy effects technology development couldn’t be achieved efficiently. Thus, it focused on the synergy effects in a comprehensive plan in 1989. The plan is called the techno-belt concept that attempts to connect between research and industry through information and telecommunication technologies.
According to the plan, Seoul and Daedeok will be technological diffusion centers connecting networks along four major techno-belts. This techno-belt concept would contribute to the formation of productive structure for the 21st century, and at the same time, the role of DI will be strengthened due to its geographical location and innovative milieu as R & D center. Furthermore, the government set up a target for DI to build South Korean Silicon Valley in the fourth National Comprehensive Land Development Plan in 2001 (Daedeok Science Town Management Office, 2002a). In addition, a recent trend to build new high-tech oriented venture businesses within and around DI can also stimulate a further development of DI. Furthermore, DI experienced a restructuring process in 2004 by being nominated as R & D Special Zone. The government authorized DI by the Daedeok R & D Special Zone Act in 2005.

To become an R & D center and create synergy effects, DI has intensified cooperative relation between government supported industries, universities and industrial laboratories. For example, the Technology Innovation Centre (TIC) and Technology Business Incubator (TBI) at KAIST carry out industry oriented projects and will facilitate technological developments in the industrial sector. In 2009, there were 18 TIC and TBI in DI and 314 new started companies operating.

Until the end of 2007, DI created 898 venture businesses operating in the Daejeon City area. A new birth of venture businesses has been increasing continuously since 1993. (See table 7) Additionally, Daejeon City government has built two high-tech based industrial parks (Industrial Site No. 3 and 4) near to DI in order to generate spin-off effects from the research results of DI (Daedeok Science Town Management Office, 2002b).
Table 7: Number of Venture Businesses in Daedeok Innopolis (1998-2007)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture businesses</td>
<td>65</td>
<td>108</td>
<td>149</td>
<td>687</td>
<td>786</td>
<td>898</td>
</tr>
</tbody>
</table>


Compared to the activity of DI before the financial crisis in 1997, the present situation in the year 2009 can be named as a restructuring process. After redesigned as DI in 2005, DI has improved its capability of R & D activities that resulted in high numbers of domestic and international patent as well as technology transfer. Additionally DI carried out its active strategy to nominate qualified high-tech venture businesses. As a result, several venture businesses could be registered in the Korea Stock Exchange (KOSDAX). (See table 8, 9)

Table 8: Number of qualified high-tech venture businesses (As of 2008)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of company</td>
<td>10</td>
<td>22</td>
<td>8</td>
<td>8</td>
<td>48</td>
</tr>
</tbody>
</table>

Source: Daedeok Innopolis, 2009, Internal Statistical Materials

Table 9: Numbers of venture businesses registered in KOSDAX (As of 2007)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of company</td>
<td>7</td>
<td>11</td>
<td>14</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Daedeok Innopolis, 2009, Internal Statistical Materials
Despite the quality oriented development since the redesigned DI, most of high-tech venture businesses are rather small sized that are less than five million US dollars output. Additionally the number of qualified high-tech venture businesses accounts only for 5.3 percent of the total number of venture businesses in DI. In particular, the number of venture business has increased rapidly since the year 2005 as DI was designated as Daedeok R & D Special Zone. It means that many venture businesses need to overcome the period of a death valley. Therefore, it is still questionable how many venture businesses could survive if DI follows the Silicon Valley model.

It is worth noting that DI is likely to have built a high quality hardware oriented infrastructure such as research institutes, universities, housing, roads etc, while it still lacks software based infrastructure such as financing, accounting, legal services etc. Such a software based infrastructure is mostly concentrated in the Seoul metropolitan area. Therefore, it may be a delicate barrier for DI to cope with.

DI’s vision for 21st century is announced as to become one of the global innovative clusters until 2015. In order to realize this target, DI has intensified its role as a national innovation hub creating technology innovation as well as supporting other seven model innovative cluster nationwide. However, it may be easily criticized that DI’s technology portfolio is too wide spread from IT to Nuclear. Therefore, it needs to focus on its core technology areas strategically because there are no global innovative clusters in various technology areas coincidently although a technology convergence is a global trend.
4. Conclusions

All cities and regions produce specific forms of spatial organization of the production process and create new spatial formation after hit by economic decline and restructuring. At the same time, these territories become the social spaces producing new forms of industrial, social, and technical structures.

In a knowledge-based economy of the globalizing economic order, the role of regions is very significant in order to create and to disperse knowledge. Particularly, geographical clusters of firms in a single sub-national region may contribute to transmitting certain kinds of knowledge between and among firms. In addition, markets prefer to favor specialized firms with a coherent body of knowledge when knowledge creation and the use of new knowledge become increasingly important for maintaining and improving a firm’s competitiveness.

Furthermore, it is often said that globalization and localization are the two sides of a coin. Without a proper localization in a country, it will face difficulties in competing with other countries in global markets. Under these circumstances, competition between nations becomes more severe than ever and advanced industrialized countries tend strongly to control their technology transfers to other nations in order to maintain their technological competitiveness in strategic areas.

With the formation of hard competition between nations based on the principles of a free market economy, high technology became the most important factor in achieving national competitiveness. Thus, many countries strengthened their technology policy and invested vast amounts of capital in research and development (R & D) projects. In order to carry out the R & D projects properly, they show a strong tendency to build science cities. To pursue a technology policy is to achieve three goals. The first is reindustrialisation, which can create new jobs in new
industries. The second objective is regional development for those regions that are most in need. Last, but not least, is the creation of synergy resulting from technological and organizational innovations.

Under these circumstances, South Korea had launched its national project to build a science town in 1973. Daedeok Science Town was focused on upgrading technological capability and sustainable economic development at national and regional levels. Along with the national and local governments, industries and universities play important roles in the town in order to create networks based on mutual interests and technology innovation. Daedeok Science Town redesigned as Daedeok Innopolis in 2005 are keen to develop or to strengthen various specific strategic technological areas such as IT technology, biotechnology, life sciences, energy technology, and new materials etc. This strategic point of view has been advantage and disadvantage for developing DI at the same time.

The central government initiated approach to build a science city costs are immense regardless of which science cities are in East Asia. Due to such a vast capital investment and a need of highly qualified manpower, establishment of DI took a long construction period. At the same time, this approach does not result in the full effects expected such as technology innovation and regional economic growth although the number of domestic and international patent as well as venture businesses has been increased rapidly since 2005. Moreover, the numbers of technology transfer and the amount of technology fee have also increased continuously in recent years. Despite such a positive trend it is still weak to impact on national and regional economic growth.

DI’s new vision to become one of the global innovative clusters within ten years seems to be a future oriented strategy. As explained, its hardware based infrastructure
has been developed excellently so far. However, DI is still in a weak position in terms of software based infrastructure such as venture and angel capital, financial services, accounting, legal services etc. It is absolutely necessary for DI to create a comprehensive innovative environment that functions as the core factor for creating global innovative clusters such as Silicon Valley in the USA and Kista Science City in Sweden.

In sum, the government involvement in national projects is inevitable, particularly in the South Korean context. At the same time, however, a combined approach with private sectors is also significant in order to vitalize activities in DI. Furthermore, a fundamental strategy, which is based on either only R & D activity or combining R & D activity with production plays also important roles in developing and strengthening DI continuously.

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DAEDEOK SCIENCE TOWN MANAGEMENT OFFICE (2002a) Comprehensive Plan and Mid and Long Term Development Strategy, DASTO, Daejeon

DAEDEOK SCIENCE TOWN MANAGEMENT OFFICE (2002b) Comprehensive Plan and Mid and Long Term Development Strategy, DASTO, Daejeon


Park, S-C (2000b) The Roles of High-Tech Oriented Companies in Science Cities: A Case Study on Tsukuba Science City in Japan and Daedeok Science Town in South Korea, Korea Observer, Vol.31, No.1, pp.73-102


Web sites

WWW.DASTO.OR.KR

www.innopolis.or.kr
Profiling High- and Low- Expectation/Growth Entrepreneurs – An Exploratory Study

Dr Naomi Birdthistle
Briga Hynes
Yvonne Costin
Sharon Lucey

In today’s rapidly changing world, nations need enterprising people who have the willingness and ability to take control of their own lives. This paper examines the characteristics and motivations for start-up of entrepreneurs of high- and low-expectation/growth companies in both Ireland and the United States. The methodology adopted was a mixed method approach which incorporated an online survey supported by a series of semi-structured interviews. The study found that there are little differences between high-and low-expectation/growth companies in terms of gender, martial status and birth order. Differences were also found in terms of industry sector, growth aspirations, with significant differences arising in terms of education. Little difference emerged in relation to the motivations for start-up. The paper provides recommendations for policy makers when formulating policy that affects this emerging cohort of entrepreneurs.

Introduction

While most new businesses focus on local markets, have relatively low growth aspirations, and imitate or replicate existing business strategies (products, markets and technologies) (Aldrich 1999; Cunningham 2008), there is an important subset of new businesses, that can be broadly classified as ‘high expectation/growth /high potential start-ups’, emerging globally. Encouraging greater numbers of individuals to start high expectation/growth businesses is high on the agenda of global governments as entrepreneurs are catalysts of growth; generating capital, innovation and skills. This exploratory paper focuses on the characteristics and motivations for start-up of entrepreneurs of high and low-expectation/growth companies, with a particular focus on entrepreneurs in both Ireland and the United States. In particular, an emphasis is placed on: the demographic profile of the entrepreneur and their business; occupational background; educational attainment; and motivational factors influencing new venture creation.

High-Expectation/Growth Defined
Varying definitions have emerged as to what constitutes a high expectation/growth firm (Buss 2002, Henrekson, and Johanson 2009). For instance, definitions vary according to how growth is measured: in profits, sales, book value, workforce, or even future expectations, and whether growth is attained through acquisitions or organically (White and Reynolds 1996). According to Autio (2007), author of the 2007 Global Entrepreneurship Monitor Report on High Growth Entrepreneurship, *high-expectation* entrepreneurs are those who are considered to be nascent and/or new entrepreneurs who expect more than 20 employees in 5 year’s time and *high-growth entrepreneurs* can be defined as those who have established a business and currently employ 20 or more. In the US context, Bloodgood, Sapiena, and Almedia (1996) define high potential ventures as new entrepreneurial ventures with high aspirations and potential for growth. In comparison, in the Irish context, the definition promoted by Enterprise Ireland (an Irish government agency) is largely adopted to describe a high potential start-up firm, which encompasses both nascent and established entrepreneurial firms. Enterprise Ireland (2008) define a high-expectation/growth firm as a business, which is based on a technological innovation; likely to achieve significant growth in 3 years (sales of €1.0m per annum and employment of 10 or more); is export oriented and ideally led by an experienced team, with a mixture of technical and commercial competencies.

As one can see from the contrasting definitions of high-expectation/growth firms, Enterprise Ireland uses two variables for measuring growth whereby Autio (2007) uses only one variable, that being growth defined by an increase in employee numbers. Bloodgood et al (1996) only alludes to growth without quantifying it in any terms. Furthermore the time scales established for the achievement of high growth differ, in that Enterprise Ireland uses a 3 year timeframe whereby Autio (2007) utilizes a 5 year timeframe. For the purpose of this study, the definition of a high-expectation/growth firm will be where the firm envisages significant
growth within 3 – 5 years with a significant increase in either sales, headcount or what other metric the respondent might use to measure growth.

**Profiling High-Expectation/Growth Firms**

There is no uniform, standardised definition of the entrepreneur, however, it is frequently contended that entrepreneurs display certain characteristics and traits (Kirby 2003). The problem however is that there is no agreement amongst theorists as to the number or form of these traits. For example, Hornaday (1982) found more than 40 traits associated with entrepreneurs whilst Gibb (1990) identifies 12. Hisrich and Peters (2002) propose that even though many aspects of an entrepreneur’s background have been explored, only a few have differentiated the entrepreneur from the general populace of managers. The background areas explored include; childhood family environment, education, age and work history (Hisrich and Peters 2002). Irish studies of entrepreneurs (O’Farrell 1986; Kinsella and Mulvenna 1993; Birdthistle 2006) have tended to explore the same background characteristics of the entrepreneur as proposed by Hisrich and Peters (2002), so as to understand motivations for start-up and characteristics of entrepreneurs (such as age, education, gender, work experience, industry sector). These traits and characteristics therefore form the basis of examining high-expectation/growth entrepreneurs within this study.

Entrepreneurs in general are viewed to possess a number of characteristics which distinguish them from the general populace. Equally, research by Autio (2007), Riley (2008) and Fitzsimons and O’Gorman (2008) would suggest that high expectation entrepreneurs can be identified by a number of common characteristics which relate to the personal profile and behavioural patterns of this subset of entrepreneurs.

**Age**: In terms of age profile, Storey (1994); Wiklund (1998) and Autio (2007) found that high-growth entrepreneurs are biased toward older individuals. Autio (2007) additionally found that high-expectation entrepreneurs are most heavily biased toward young individuals.
In his study, Autio (2007) found that 19 percent of high-expectation entrepreneurs were between the ages of 18 and 24 years old, whereas only 3 percent of established high-growth entrepreneurs were observed in this age bracket. In contrast, the two oldest age categories are overrepresented among high-growth established entrepreneurs and under-represented among high-expectation entrepreneurs.

**Gender:** Globally it would appear that females are underrepresented in establishing new ventures but are extremely underrepresented in the high-expectation/growth category of new venture creation. This is supported by a number of national and global studies. For instance, Zhang, Yang and Ma (2008) found that female entrepreneurs are in general underrepresented in China but are extremely underrepresented in the high-expectation/growth category of entrepreneurship. Similar finding were found by Fisher (2006) who found that only 7 percent of US high-expectation/growth entrepreneurs were owned by women and Fitzsimons and O’Gorman (2008) found that more men than female entrepreneurs have aspirations to be a high-expectation/growth firm in Ireland.

**Education:** In their studies, Autio (2007) and Riley (2008) have found that the majority of high-expectation/growth entrepreneurs have tertiary level qualifications. Riley (2008) found that 92 percent of high-expectation/growth entrepreneurs surveyed had undergraduate degrees, 31 percent held Masters and 10 percent had PhDs.

**Relevant Industry Experience:** Evidence has shown that high-expectation/growth entrepreneurs will have relevant management expertise within the industry sector that the new firm is established in and will generally have formalized professional networks within that industry sector (Siegel, Siegel, and MacMillan 1993, Fesser and Willard 1990).

**Number of Founders:** High-expectation/growth firms will typically be founded by a team of entrepreneurs rather than a single entrepreneur. A team of entrepreneurs can provide a
greater pool of resources, more idea sharing and broader diversity than ventures with a sole founder (Watson, Steward, and BarNir 2003, Barkham 1994).

**Industry sector of business:** The distribution of high-expectation/growth entrepreneurs across business sectors provides insight into the effect of industry structure on high growth entrepreneurship. High-expectation/growth entrepreneurs are underrepresented in the agriculture, fishery, forestry, and hunting sectors (for example primary agricultural output). High-expectation/growth entrepreneurs are slightly overrepresented in the manufacturing sector and in transportation, communication, and utilities. While *high-expectation* entrepreneurs are underrepresented in retail, hotel, and restaurant sectors, *high-growth* entrepreneurs are not. Interestingly, *high-expectation* entrepreneurs are overrepresented in the financial, insurance, and real-estate sectors, *high-expectation* entrepreneurs are underrepresented (Autio 2007).

**Parental influence:** Fitzsimons and O’Gorman (2005) found that having self-employed parents increase the propensity of individuals to engage in new venture creation in Ireland. O’Farrell’s (1986) study showed that 46 percent of new firm founders had fathers who were self-employed at a time when only 27 percent of the population was self-employed. This study will identify whether a similar finding will be attributed to the high-expectation/growth entrepreneur.

This study seeks to also examine the motivations and reasons for establishing the high-expectation/growth firm. Individuals start a new business for reasons which are classified as either opportunity or necessity driven a classification parallel to ‘pull’ and ‘push’ factors (Reynolds, Camp, Bygrave, Autio, and Hay 2001, Acs 2006, Hessels, Gelderen, and Thurik 2008). Opportunity entrepreneurship reflects a positive perception and attitude to self employment by the entrepreneur, whereas necessity entrepreneurship emerges where individuals start a new business due to negative reasons, mainly the absence of employment
opportunities. A number of studies investigated variances across individual motivations for starting a business and their impact on the growth of the business. Agreement existed within the majority of research that owner-managers who started their business for positive ‘pull’ factors such as to exploit an opportunity in the market achieved higher levels of firm growth compared to a business for which the primary reasons were negative ‘push’ factors such as unemployment, dissatisfaction with present employment (Kinsella, Clarke, Storey, Mulvenna, and Coyne 1994, Storey 1994, Smallbone and North 1995, Smallbone and Wyer 2000, Hamilton and Lawrence 2001, Reynolds, Camp, Bygrave, Autio, and Hay 2001).

In summary, the literature has found that relative to the broad population of entrepreneurs, high-expectation/growth entrepreneurs tend to be younger, more highly educated, male dominated, have previous employment in the industry in which they established their firm in and establish firms in higher added value industry sectors. In order to further build on these findings, this exploratory study will examine the characteristics and motivations for start-up of a sample of high expectation/growth entrepreneurs and compare the findings to a sample of low-expectation/growth entrepreneurs.

**Methodology Utilized in the Study**

The methodology adopted for this exploratory study is a mixed method approach incorporating an online survey and semi-structured interviews. An online survey approach was chosen as the principal means of gathering data for this research as it allows the researcher to conduct a national study at a reasonable cost and is less time consuming than those administered by an interviewer. The high-expectation/growth entrepreneurs (HEG) database was generated through the identification of annual reports from government agencies in both Ireland and the US. Extrapolating data from these reports resulted in the identification of 187 HEG companies for Ireland and 186 HEG companies for the US, which had email addresses identified for them thus enabling for the personalization of the emails. Even though
this was extremely time consuming for the research team, the pilot study showed that through the personalization of emails, there is the probability of a higher response rate. Concerning the formulation of the database for the low expectation/growth companies [LEG], this was done using databases from the Company Registration Office, Kompass, the Golden Pages and other online resources. The research team ensured that there were respondents from similar locations to the HEG companies. Both the HEG and LEG databases were then compared against each other to ensure that there was no duplication. A total of 189 LEG companies were identified for Ireland and 107 LEG companies for the US.

The questionnaire adopted for the study of HEG/LEG respondents was subject to extensive screening by the research team, tested on government representatives in both countries and pilot tested by 10 entrepreneurs representing both Ireland and the US, so as to take into account cultural variations. Based on their feedback some questions were condensed in size, options were reduced and it was recommended to send a personalized email to each of the potential respondents. With sampling complete, the pilot survey carried out and the questionnaire finalised, it only remained to administer the survey to the chosen sample. The questionnaire was administered through www.surveymonkey.com.

The interviewees for this study were identified from the final question on the online survey, which asked the respondents if they would be interested in taking part in an interview. An interview schedule was designed and focused on probing more deeply into the characteristics and personality traits of the entrepreneurs. The interviews were held between December 2009 and February 2010, at the premises of the interviewee in both Ireland and the US. Each interview lasted approximately 30 – 40 minutes and was recorded using a Dictaphone. In keeping with the method adopted for the qualitative study, multiple sources of data collection such as documents, website and archival records were also used to overcome
the limitations of any individual source if possible. Table 1 below identifies the online response rate and Table 2 identifies the number of interviews conducted in both countries.

**Table 1**  
Response Rate for the Online Survey for Ireland and the US

<table>
<thead>
<tr>
<th></th>
<th>UNITED STATES</th>
<th>High expectation/growth company</th>
<th>Low expectation/growth company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued</td>
<td>373</td>
<td>296</td>
<td></td>
</tr>
<tr>
<td>Wrong address</td>
<td>(128)</td>
<td>(115)</td>
<td></td>
</tr>
<tr>
<td>Other reason</td>
<td>(17)</td>
<td>(11)</td>
<td></td>
</tr>
<tr>
<td>Number of valid respondents</td>
<td>228</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>Valid response rate</td>
<td>37</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Valid response percent</td>
<td>16.2%</td>
<td>16.5%</td>
<td></td>
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</tbody>
</table>

**Table 2:**  
Interview Respondents for Ireland and the US

<table>
<thead>
<tr>
<th></th>
<th>High expectation/growth company</th>
<th>Low expectation/growth company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>United States</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

**Findings**

As mentioned previously, the aim of this paper is to examine the characteristics of entrepreneurs of high- and low-expectation/growth companies in Ireland and the US and their motivations for start-up. In particular, emphasis is placed on: the demographic profile of the entrepreneur and their business; occupational background; educational attainment; and motivational factors influencing new venture creation.

**Demographic Profile of the respondents**

The findings of this study identify two cohorts of respondents: those classified as high expectation/growth (HEG) entrepreneurs of which there were 37 respondents and low expectation/growth (LEG) entrepreneurs of which there were 28 respondents. Table 3 below compares and contrasts the quantitative findings of the HEG and LEG respondents based on gender, marital status and birth order.
As is evident from Table 3, similar findings can be found concerning the profile of the HEG and LEG entrepreneurs whereby, the majority were male, married, and the eldest child. Respondents for the questionnaire and the interviews from Ireland tended to be younger in terms of age of start up when compared to the US. The findings of the interviews reflect the findings above as well. In the case of the HEG interviewees, seven were male and one was female. All LEG interviewees in Ireland and the US were male. In both LEG and HEG cases, there was a balanced view by respondents concerning their parents entrepreneurial background. For HEG respondents, it was found that 36 percent had a father who was self-employed, 8 percent of mother’s were self-employed and 11 percent had both parents who were self-employed. In the case of 45 percent of respondents, they identified that neither parents were self-employed. For LEG respondents, 46 percent have a father who was self-employed and 8 percent identified that both parents were self-employed. The remaining 46 percent identified that neither parents were self-employed. More notable differences existed in terms of the educational profile of the HEG and LEG entrepreneurs as described in Table 4.
As is evident from Table 4 above, three times as many HEG respondents have higher degrees (for example at Masters and PhD level) in comparison to LEG respondents. Some 30 percent of LEG respondents have no tertiary level qualifications whereby only 3 percent of HEG respondents do not. This was further substantiated by the HEG interviewees, who identified that their lowest level of qualification was a postgraduate degree. In the US, the HEG interviewees stated the highest educational qualification attained was a tertiary level award at Masters level, with a high incidence of non-business disciplines being studied. When questioned on the subject area of their qualification, the majority of online HEG respondents identified engineering and electronics, with business being the next most popular subject area. Conversely for LEG respondents, a business related qualification was the most popular amongst this group. Variations also occurred in terms of the number of years prior work experience online respondents had gained and Table 5 highlights the results.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Highest educational qualification obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HEG (n=36)</td>
</tr>
<tr>
<td>No formal qualifications</td>
<td>0%</td>
</tr>
<tr>
<td>High School or less</td>
<td>3%</td>
</tr>
<tr>
<td>National Certificate</td>
<td>3%</td>
</tr>
<tr>
<td>National Diploma</td>
<td>3%</td>
</tr>
<tr>
<td>Degree or equivalent (BA, BSc)</td>
<td>33%</td>
</tr>
<tr>
<td>Higher degree (Masters, PhD)</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Number of years prior work experience</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>HEG (n=36)</td>
</tr>
<tr>
<td>None</td>
<td>0%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>0%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>11%</td>
</tr>
<tr>
<td>5-6 years</td>
<td>3%</td>
</tr>
<tr>
<td>7-8 years</td>
<td>6%</td>
</tr>
<tr>
<td>9-10 years</td>
<td>11%</td>
</tr>
<tr>
<td>10+ years</td>
<td>69%</td>
</tr>
</tbody>
</table>
As Table 5 indicates, the majority of HEG and LEG respondents had 10 or more years work experience prior to establishing their own business. However, the table indicates that there are a number of LEG respondents who went into business without any prior work experience. In the case of Irish HEG and LEG interviewees it was found that they all had 15+ years prior work experience. Interestingly, both the HEG and LEG interviewees in the US indicated slightly lower levels of prior work experience, though the majority had nine plus years experience. When one compares the positions of authority held by these respondents prior to establishing their own business it is evident that HEG respondents were in positions of greater authority and responsibility than LEG respondents. HEG respondents identified that they held President and Vice President positions, CEO’s positions, and/or Director of Sales and Marketing, whereby LEG respondents were Operational Managers, General Managers and team leaders. One line respondents were questioned as to whether this was their first business or not and 63 percent of HEG’s and 64 percent of LEG’s indicated it was their first venture. This was further supported by the interviewees as all interviewees in both countries identified that this was their first business venture.

In relation to how the businesses were established, similar findings were found for both HEG and LEG respondents. Some 74 percent of HEG’s and 68 percent of LEG’s highlighted that the business was founded by a team of entrepreneurs. The interviewees gave similar findings as well whereby out of the 13 interviews conducted all bar 3 were founded by teams of entrepreneurs. In relation to industry sector, this study found that high-expectation/growth firms are under-represented in the services sector as only 18 percent of online HEG respondents and one HEG interviewee operate within this sector. The ICT sector was the most prevalent sector for HEG respondents (45 percent of online respondents and four interviewees) and for LEG respondents (50 percent of online respondents and two interviewees). This was followed by the Electronics/Engineering sector as 36 percent of
online HEG respondents and four interviewees, two LEG interviewees and 19 percent of online respondents operating within this sector. The second most common sector for the online LEG respondents was the services sector (25 percent) along with one interviewee indicating this sector.

**Motivations In Establishing The Business**

Respondents were questioned as to the route they took to establishing their business. In the majority of HEG (77 percent) and LEG (68 percent) responses, the route to market was through the formulation of their own business idea. Of those that responded, the event that alerted HEG respondents (n=29) to their business opportunity was primarily based on observing new trends emerging in the market with 38 percent respondents indicating this as a route and 39 percent of LEG respondents (n=18) identified this as a route to market. A niche in the market was identified by 56 percent of respondents and 35 percent of HEG respondents also chose this as a route to market. Motivations for starting the business were also examined with various and numerous responses emerging through the research findings. Initially, respondents were presented with a listing (as seen in Table 6 below) of push and pull factors and asked to rate the factors based on their level of importance.

**Table 6  Push and Pull Factors**

<table>
<thead>
<tr>
<th></th>
<th>HEG</th>
<th></th>
<th></th>
<th>LEG</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Important</td>
<td>Not</td>
<td>n</td>
<td>Important</td>
<td>Not</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>important</td>
<td></td>
<td></td>
<td>important</td>
</tr>
<tr>
<td>Freedom</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>19</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Realize your dream</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>20</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Be your own boss</td>
<td>34</td>
<td>85%</td>
<td>15%</td>
<td>20</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>Independence</td>
<td>34</td>
<td>100%</td>
<td>0.0%</td>
<td>20</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Autonomy of decisions</td>
<td>34</td>
<td>76%</td>
<td>24%</td>
<td>21</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>Creating something</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>20</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Enjoy advantages from your creative potential</td>
<td>33</td>
<td>91%</td>
<td>9%</td>
<td>19</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Challenges in the job</td>
<td>34</td>
<td>91%</td>
<td>9%</td>
<td>20</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Job security</td>
<td>34</td>
<td>27%</td>
<td>73%</td>
<td>21</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Stable conditions on the job</td>
<td>34</td>
<td>18%</td>
<td>82%</td>
<td>19</td>
<td>21%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Evidently for HEG respondents, the highest level of importance was placed on “pull factors”, namely “Independence” (100 percent); “Freedom” (97 percent); “Realize a dream” (97 percent) and “Creating Something” (97 percent), followed very closely by other pull factors such as “Challenges in the job” (91 percent); “Enjoy advantages from your creative potential” (91 percent); and “Being your own boss” (85 percent). Conversely, the highest level of importance for LEG respondents was placed on both “pull and push factors”, namely “Independence” (100 percent); “Challenges in the job” (95 percent); “Freedom” (95 percent); “Creating something” (95 percent) and “Realize a dream” (85 percent), followed very closely by other pull factors such as “Enjoy advantages from your creative potential” (90 percent); and “Being your own boss” (70 percent). Both HEG and LEG respondents rated “Autonomy of decision” with a high level of importance, whereby 76 percent of HEG respondents and 67 percent of LEG respondents indicated that this was “important”. Both parties agreed that the least important factors were “Stable conditions on the job” (18 percent HEG and LEG 21 percent) and “Job security” (HEG 27 percent, LEG 33 percent). These findings were further supported by the interviews, whereby interviewees stressed the desire for control and/or the need to create something new.

In addition, the research continued to investigate the specific motivations of the entrepreneurs in starting the business by posing a question influenced by the GLOBE Culture and Leadership Scales (2006). Respondents were presented with 17 statements and invited them to agree or disagree with each of them and Table 7 indicates the results.

**Table 7 Motivations for starting the business**

<table>
<thead>
<tr>
<th>Motivations for starting the business</th>
<th>HEG</th>
<th>LEG</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wanted to make more money than I was earning before</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>I wanted the freedom to adopt my own approach to work</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>I always wanted to be my own boss</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>I wanted to get away from discrimination that occurred at my previous place of employment</td>
<td>21</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>n</th>
<th>Agree</th>
<th>n</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>67%</td>
<td></td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td></td>
<td>89%</td>
<td></td>
</tr>
<tr>
<td>83%</td>
<td></td>
<td>84%</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Reason</td>
<td>HEG Respondents</td>
<td>LEG Respondents</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>I was dissatisfied in my previous job</td>
<td>20 35%</td>
<td>18 39%</td>
<td></td>
</tr>
<tr>
<td>I wanted to challenge myself/prove that I could do it</td>
<td>19 90%</td>
<td>18 67%</td>
<td></td>
</tr>
<tr>
<td>I wanted to continue a family tradition</td>
<td>21 14%</td>
<td>18 17%</td>
<td></td>
</tr>
<tr>
<td>I was unable to obtain regular suitable paid employment</td>
<td>20 10%</td>
<td>18 11%</td>
<td></td>
</tr>
<tr>
<td>I had been made redundant</td>
<td>18 11%</td>
<td>18 17%</td>
<td></td>
</tr>
<tr>
<td>I had been out of work for a period of time</td>
<td>18 0%</td>
<td>17 0%</td>
<td></td>
</tr>
<tr>
<td>I wanted to follow the example of someone I admired</td>
<td>19 26%</td>
<td>18 22%</td>
<td></td>
</tr>
<tr>
<td>I wanted to develop a hobby into a commercial enterprise</td>
<td>19 16%</td>
<td>18 0%</td>
<td></td>
</tr>
<tr>
<td>I wanted to make an idea or innovation happen</td>
<td>18 89%</td>
<td>18 50%</td>
<td></td>
</tr>
<tr>
<td>I wanted to do something that helps/supports other people</td>
<td>18 33%</td>
<td>18 22%</td>
<td></td>
</tr>
<tr>
<td>I wanted to do something that helps/supports the environment</td>
<td>18 6%</td>
<td>18 6%</td>
<td></td>
</tr>
<tr>
<td>I wanted my business to be better than my previous employer</td>
<td>18 22%</td>
<td>18 28%</td>
<td></td>
</tr>
<tr>
<td>I wanted to be able to work from home</td>
<td>21 19%</td>
<td>18 22%</td>
<td></td>
</tr>
</tbody>
</table>

For HEG respondents it emerged that the highest percentage of respondents indicated that they “wanted the freedom to adopt their own approach to work”, “wanted to make an idea or innovation happen” and “wanted to challenge themselves/prove that they could do it”, accounting for between 89 and 90 percent. These were followed very closely by “always wanted to be their own boss” which counted for 83 percent. These findings were further substantiated in the HEG interviews in both Ireland and the US with interviewees identifying that they “wanted to make an idea or innovation happen” and “wanted to be own boss” being stated as their motivation for starting up their business. Furthermore, 67 percent of HEG respondents indicated that they “wanted to make more money” than they were earning before.

For online LEG respondents and interviewee the greatest motivation in starting the business resulted from the respondents desire for “freedom to adopt my own approach to work” (89 percent), with “I always wanted to be my own boss” (84 percent) as the second most important reason in starting the business. The next most popular response for LEG respondents was that of “I wanted to challenge myself/prove that I could do it” with 67 percent of respondents answering this question. Both “I wanted to make an idea or innovation to happen” and “I wanted to make more money than I was earning before” were agreed by 50 percent and 56 percent respectively of the LEG respondents who answered this section.
In summary, the findings suggest a slightly higher tendency for HEG entrepreneurs to start their businesses for positive opportunity sensing reasons. That said overall, the motivations for start up for both HEG and LEG do not differ greatly. The respondents were questioned as to whether they were likely to achieve growth within a certain time period and whether the firm was capable of achieving that growth and Table 8 indicates the results.

<table>
<thead>
<tr>
<th>Table 8 Growth Aspirations</th>
<th>HEG (n=27)</th>
<th>LEG (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on a technological innovation</td>
<td>92%</td>
<td>84%</td>
</tr>
<tr>
<td>Likely to achieve significant growth in 3-5 years</td>
<td>100%</td>
<td>74%</td>
</tr>
<tr>
<td>Export oriented</td>
<td>92%</td>
<td>78%</td>
</tr>
<tr>
<td>Led by an experienced team with a mixture of technical and commercial competencies</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The findings contained within Table 8 above identify that growth is a key imperative for HEG respondents when compared to LEG respondents. All HEG respondents indicated that this was a likely possibility in 3-5 years time when compared to LEG respondent’s views on this (only 74 percent of LEG respondents agreed with this). More HEG respondents are export orientated compared to LEG respondents and more HEG respondents enterprises are based on a technological innovation when compared to LEG respondents.

Conclusions

High-expectation/growth enterprises are gaining increased momentum in government policy. However, given their emerging nature, there is a lack of information profiling this subset of entrepreneur or the type of business they operate; separate to the more general population of entrepreneurs. This study has attempted to bridge this knowledge gap. The findings indicate that some clear differences exist between the HEG entrepreneur and the LEG entrepreneur at the individual level. Firms did not differ greatly in terms of motivations to start up however pronounced differences are identified in the areas of age; education; gender; work experience; industry sector; and each are discussed below.
Age: On a global basis, established high-growth entrepreneurs are biased towards older individuals and similar findings were found for HEG companies in this study. When one compares the LEG and HEG enterprises there is a similar age difference as well. When one extrapolates the data even more one finds that HEG respondents and interviewees in Ireland tended to be younger in terms of start-up when compared to the US. This indicates that high-expectation/growth entrepreneurs tend to be older in the US which reinforces the emerging nature of high-expectation/growth entrepreneurs in Ireland.

Previous studies support the idea that the age of the entrepreneur has an influence on the growth of the business, where firms owned by younger individuals displayed higher levels of growth. Other research suggests that with an increase in age, the entrepreneur will accumulate knowledge and experience, and will have greater access to and use of networks, which influence subsequent firm growth, thus supporting the idea that older entrepreneurs achieve higher levels of growth. According to the Irish GEM Report (Fitzsimons and O’Gorman 2007) and Autio (2007), individuals are starting businesses at a younger age, thus implying that they will have less previous work experience than older entrepreneurs who may have a greater wealth of experience, have more experience of operating and managing a business and have more established networks which can benefit them in growing a business, in turn impacting on growth of the business.

Education: Differences in the type and level of educational award were found within this study. As found by Autio (2007) and Riley (2008) the majority of high expectation/growth entrepreneurs have tertiary level qualifications. The findings of this study concur with these findings, as HEG entrepreneurs have higher educational awards with a noticeable number at postgraduate and doctoral level and in technical areas relative to LEG entrepreneurs. The benefit of having a tertiary level education results in entrepreneurs not only developing their technical skills but also develops contacts and social capital for the
business which can aid in the growth of the business. The results indicate that the majority of HEG respondents and interviewees are emanating from non-business disciplines in comparison to LEG respondents. There are implications here for educational policy makers in that it is imperative that tertiary level educators include entrepreneurship as a field of study within non-business fields. Furthermore, for the supports given by government agencies, they should be cognizant of the fact that HEG entrepreneurs may have no business education or background.

**Gender:** Females globally are under-represented in the high expectation/growth category of entrepreneurs and similar findings were found within this study. In this study it was found that females were sorely under-represented since only 11 percent of HEG online respondents and 3 percent of LEG respondents were female. Interestingly, in the interviews, 22 percent of HEG founders were female, and all LEG founders were male. Further research is required to examine why this is the case in Ireland, the US and/or globally.

**Work experience:** The results of this study highlight that both LEG and HEG respondents have prior work experience prior to establishing their own business. No significant differences were found in terms of the length of work experience. It was, however, interesting that both groups of respondents had 10 or more years work experience prior to establishing their own business. When further examined on their work experience, it was evident that HEG respondents had gained more experience at managerial levels than LEG entrepreneurs. When broken down further, the findings identify that respondents in the US started their high-expectation/growth firm with less prior work experience compared to Irish HEG entrepreneurs. This could be due to the entrepreneurial culture in the US where entrepreneurs start businesses earlier and there is engendered in people a more entrepreneurial culture in comparison to what is present in Ireland.

**Motivations:**
HEG respondents are more motivated to establish a business by ‘pull factors’ when compared with LEG respondents. The motivations for HEG are primarily independence; freedom; realize a dream; creating something new; being one’s own boss and enjoying advantages from creative potential. The key motivations for LEG entrepreneurs are independence, challenges on the job; freedom; creating something and realize a dream. Both HEG and LEG respondents appear not to be highly motivated by helping or supporting the environment, however, this needs to be further researched as a result of the emergence of ‘social entrepreneurs’. More HEG respondents have a greater desire to help and/or support other people more so than LEG respondents. Innovation was a greater motivation for HEG respondents than for LEG respondents. Interestingly, more HEG respondents were motivated to establish their business as a result of redundancy than LEG respondents. In light of the current economic climate it would be worthwhile investigating this further in future studies.

The positive aspirations from the pull factors are important from a policy perspective in that people are interested in establishing high-expectation/growth firms and these should be reflected upon by policy makers and further nurtured and supported by policy in creating awareness and opportunities in creating such firms.

On a broader perspective given the variations in the definitions and characteristics applied to the term high-expectation/growth entrepreneurs there should be ongoing debate about what this term means and how it is interpreted by the practitioner and if there is a policy-practitioner gap in terms of its meaning. This requires further deliberation. Given the variety of perceptions of what a high-expectation/growth firm is, policy makers should take consideration of the interpretations of the respondents when devising the definition so as to reduce the perceptual gap that exists.
Acknowledgements

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Dr Naomi Birdthistle is a lecturer in Entrepreneurship and MBA programme director at the University of Limerick. Naomi’s research expertise is in the area of family business management and entrepreneurship education. Naomi is a Government of Ireland Scholar having been funded by the Irish Research Council for the Social Sciences for a two-year study which is examining the characteristics and personality traits of high potential start-up companies in both Ireland and the US. Naomi was recently recognised as an outstanding higher education teacher by being awarded the ‘Shannon Consortium’s Regional Teaching Award’

Briga Hynes

Briga is a lecturer in Entrepreneurship at the University of Limerick and Programme Director for the MBS in International Entrepreneurship Management. Briga’s main research interests lie in entrepreneurship and SME business growth, with a principal focus on an evaluation of the determinants of small firm growth and the process strategy development in the SME. A second stream of complimentary research explores how best owner-manager skills and competencies can be enhanced through management development interventions and mentoring programmes. She has also published on the topic of entrepreneurship education, where the research investigates the different pedagogical approaches to teaching entrepreneurship across disciplines. Briga is also involved in a number of outreach activities with entrepreneurs and owner-managers and is also a Board member of Limerick City Enterprise Board, Southill Advisory Management Group, The Management Development Council, (Forfás), and is a project Evaluator for Social Entrepreneurs Ireland.

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Yvonne Costin is a Lecturer in Entrepreneurship in the Department of Management and Marketing, Kemmy Business School, University of Limerick. Yvonne is responsible for teaching Enterprise Formation, Enterprise Development and Business Consulting at an undergraduate and postgraduate level. She is currently pursuing a PhD study in the area of female entrepreneurship. Her main research interests include entrepreneurship education at both primary and tertiary levels, female entrepreneurship and growth achievement in entrepreneurial firms.

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Sharon Lucey is currently a PhD student in the Kemmy Business School, University of Limerick. Her PhD study focuses on how high growth entrepreneurship can be supported and sustained in Ireland. She holds a Masters of Business Studies in Entrepreneurship Management from the University of Limerick and has previous work experience as a socio-economic researcher and consultant. Her main research interests include; high growth entrepreneurship, small firm growth, economic growth, and enterprise policy.
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Profiling High- and Low-Expectation/Growth Entrepreneurs – An Exploratory Study

Dr Naomi Birdthistle
Briga Hynes
Yvonne Costin
Sharon Lucey

Abstract

In today's rapidly changing world, nations need enterprising people who have the willingness and ability to take control of their own lives. This paper examines the characteristics and motivations for start-up of entrepreneurs of high- and low-expectation/growth companies in both Ireland and the United States. The methodology adopted was a mixed method approach which incorporated an online survey supported by a series of semi-structured interviews. The study found that there are little differences between high-and low-expectation/growth companies in terms of gender, martial status and birth order. Differences were also found in terms of industry sector, growth aspirations, with significant differences arising in terms of education. Little difference emerged in relation to the motivations for start-up. The paper provides recommendations for policy makers when formulating policy that affects this emerging cohort of entrepreneurs.

Introduction

While most new businesses focus on local markets, have relatively low growth aspirations, and imitate or replicate existing business strategies (products, markets and technologies) (Aldrich 1999; Cunningham 2008), there is an important subset of new businesses, that can be broadly classified as ‘high expectation/growth /high potential start-ups’, emerging globally. Encouraging greater numbers of individuals to start high expectation/growth businesses is high on the agenda of global governments as entrepreneurs are catalysts of growth; generating capital, innovation and skills. This exploratory paper focuses on the characteristics and motivations for start-up of entrepreneurs of high and low-expectation/growth companies, with a particular focus on entrepreneurs in both Ireland and the United States. In particular, an emphasis is placed on: the demographic profile of the entrepreneur and their business; occupational background; educational attainment; and motivational factors influencing new venture creation.
High-Expectation/Growth Defined

Varying definitions have emerged as to what constitutes a high expectation/growth firm (Buss 2002, Henrekson, and Johanson 2009). For instance, definitions vary according to how growth is measured: in profits, sales, book value, workforce, or even future expectations, and whether growth is attained through acquisitions or organically (White and Reynolds 1996). According to Autio (2007), author of the 2007 Global Entrepreneurship Monitor Report on High Growth Entrepreneurship, high-expectation entrepreneurs are those who are considered to be nascent and/or new entrepreneurs who expect more than 20 employees in 5 year’s time and high-growth entrepreneurs can be defined as those who have established a business and currently employ 20 or more. In the US context, Bloodgood, Sapiena, and Almedia (1996) define high potential ventures as new entrepreneurial ventures with high aspirations and potential for growth. In comparison, in the Irish context, the definition promoted by Enterprise Ireland (an Irish government agency) is largely adopted to describe a high potential start-up firm, which encompasses both nascent and established entrepreneurial firms. Enterprise Ireland (2008) define a high-expectation/growth firm as a business, which is based on a technological innovation; likely to achieve significant growth in 3 years (sales of €1.0m per annum and employment of 10 or more); is export oriented and ideally led by an experienced team, with a mixture of technical and commercial competencies.

As one can see from the contrasting definitions of high-expectation/growth firms, Enterprise Ireland uses two variables for measuring growth whereby Autio (2007) uses only one variable, that being growth defined by an increase in employee numbers. Bloodgood et al (1996) only alludes to growth without quantifying it in any terms. Furthermore the time scales established for the achievement of high growth differ, in that Enterprise Ireland uses a 3 year timeframe whereby Autio (2007) utilizes a 5 year timeframe. For the purpose of this study, the definition of a high-expectation/growth firm will be where the firm envisages significant
growth within 3 – 5 years with a significant increase in either sales, headcount or what other metric the respondent might use to measure growth.

**Profiling High-Expectation/Growth Firms**

There is no uniform, standardised definition of the entrepreneur, however, it is frequently contended that entrepreneurs display certain characteristics and traits (Kirby 2003). The problem however is that there is no agreement amongst theorists as to the number or form of these traits. For example, Hornaday (1982) found more than 40 traits associated with entrepreneurs whilst Gibb (1990) identifies 12. Hisrich and Peters (2002) propose that even though many aspects of an entrepreneur’s background have been explored, only a few have differentiated the entrepreneur from the general populace of managers. The background areas explored include; childhood family environment, education, age and work history (Hisrich and Peters 2002). Irish studies of entrepreneurs (O’Farrell 1986; Kinsella and Mulvenna 1993; Birdthistle 2006) have tended to explore the same background characteristics of the entrepreneur as proposed by Hisrich and Peters (2002), so as to understand motivations for start-up and characteristics of entrepreneurs (such as age, education, gender, work experience, industry sector). These traits and characteristics therefore form the basis of examining high-expectation/growth entrepreneurs within this study.

Entrepreneurs in general are viewed to possess a number of characteristics which distinguish them from the general populace. Equally, research by Autio (2007), Riley (2008) and Fitzsimons and O’Gorman (2008) would suggest that high expectation entrepreneurs can be identified by a number of common characteristics which relate to the personal profile and behavioural patterns of this subset of entrepreneurs.

**Age:** In terms of age profile, Storey (1994); Wiklund (1998) and Autio (2007) found that high-growth entrepreneurs are biased toward older individuals. Autio (2007) additionally found that high-expectation entrepreneurs are most heavily biased toward young individuals.
In his study, Autio (2007) found that 19 percent of high-expectation entrepreneurs were between the ages of 18 and 24 years old, whereas only 3 percent of established high-growth entrepreneurs were observed in this age bracket. In contrast, the two oldest age categories are overrepresented among high-growth established entrepreneurs and under-represented among high-expectation entrepreneurs.

**Gender:** Globally it would appear that females are underrepresented in establishing new ventures but are extremely underrepresented in the high-expectation/growth category of new venture creation. This is supported by a number of national and global studies. For instance, Zhang, Yang and Ma (2008) found that female entrepreneurs are in general underrepresented in China but are extremely underrepresented in the high-expectation/growth category of entrepreneurship. Similar finding were found by Fisher (2006) who found that only 7 percent of US high-expectation/growth entrepreneurs were owned by women and Fitzsimons and O’Gorman (2008) found that more men than female entrepreneurs have aspirations to be a high-expectation/growth firm in Ireland.

**Education:** In their studies, Autio (2007) and Riley (2008) have found that the majority of high-expectation/growth entrepreneurs have tertiary level qualifications. Riley (2008) found that 92 percent of high-expectation/growth entrepreneurs surveyed had undergraduate degrees, 31 percent held Masters and 10 percent had PhDs.

**Relevant Industry Experience:** Evidence has shown that high-expectation/growth entrepreneurs will have relevant management expertise within the industry sector that the new firm is established in and will generally have formalized professional networks within that industry sector (Siegel, Siegel, and MacMillan 1993, Fesser and Willard 1990).

**Number of Founders:** High-expectation/growth firms will typically be founded by a team of entrepreneurs rather than a single entrepreneur. A team of entrepreneurs can provide a
greater pool of resources, more idea sharing and broader diversity than ventures with a sole founder (Watson, Steward, and BarNir 2003, Barkham 1994).

**Industry sector of business:** The distribution of high-expectation/growth entrepreneurs across business sectors provides insight into the effect of industry structure on high growth entrepreneurship. High-expectation/growth entrepreneurs are underrepresented in the agriculture, fishery, forestry, and hunting sectors (for example primary agricultural output). High-expectation/growth entrepreneurs are slightly overrepresented in the manufacturing sector and in transportation, communication, and utilities. While *high-expectation* entrepreneurs are underrepresented in retail, hotel, and restaurant sectors, *high-growth* entrepreneurs are not. Interestingly, *high-expectation* entrepreneurs are overrepresented in the financial, insurance, and real-estate sectors, *high-expectation* entrepreneurs are underrepresented (Autio 2007).

**Parental influence:** Fitzsimons and O’Gorman (2005) found that having self-employed parents increase the propensity of individuals to engage in new venture creation in Ireland. O’Farrell’s (1986) study showed that 46 percent of new firm founders had fathers who were self-employed at a time when only 27 percent of the population was self-employed. This study will identify whether a similar finding will be attributed to the high-expectation/growth entrepreneur.

This study seeks to also examine the motivations and reasons for establishing the high-expectation/growth firm. Individuals start a new business for reasons which are classified as either opportunity or necessity driven a classification parallel to ‘pull’ and ‘push’ factors (Reynolds, Camp, Bygrave, Autio, and Hay 2001, Acs 2006, Hessels, Gelderen, and Thurik 2008). Opportunity entrepreneurship reflects a positive perception and attitude to self employment by the entrepreneur, whereas necessity entrepreneurship emerges where individuals start a new business due to negative reasons, mainly the absence of employment
opportunities. A number of studies investigated variances across individual motivations for starting a business and their impact on the growth of the business. Agreement existed within the majority of research that owner-managers who started their business for positive ‘pull’ factors such as to exploit an opportunity in the market achieved higher levels of firm growth compared to a business for which the primary reasons were negative ‘push’ factors such as unemployment, dissatisfaction with present employment (Kinsella, Clarke, Storey, Mulvenna, and Coyne 1994, Storey 1994, Smallbone and North 1995, Smallbone and Wyer 2000, Hamilton and Lawrence 2001, Reynolds, Camp, Bygrave, Autio, and Hay 2001).

In summary, the literature has found that relative to the broad population of entrepreneurs, high-expecation/growth entrepreneurs tend to be younger, more highly educated, male dominated, have previous employment in the industry in which they established their firm in and establish firms in higher added value industry sectors. In order to further build on these findings, this exploratory study will examine the characteristics and motivations for start-up of a sample of high expectation/growth entrepreneurs and compare the findings to a sample of low-expectation/growth entrepreneurs.

**Methodology Utilized in the Study**

The methodology adopted for this exploratory study is a mixed method approach incorporating an online survey and semi-structured interviews. An online survey approach was chosen as the principal means of gathering data for this research as it allows the researcher to conduct a national study at a reasonable cost and is less time consuming than those administered by an interviewer. The high-expectation/growth entrepreneurs (HEG) database was generated through the identification of annual reports from government agencies in both Ireland and the US. Extrapolating data from these reports resulted in the identification of 187 HEG companies for Ireland and 186 HEG companies for the US, which had email addresses identified for them thus enabling for the personalization of the emails. Even though
this was extremely time consuming for the research team, the pilot study showed that through the personalization of emails, there is the probability of a higher response rate. Concerning the formulation of the database for the low expectation/growth companies [LEG], this was done using databases from the Company Registration Office, Kompass, the Golden Pages and other online resources. The research team ensured that there were respondents from similar locations to the HEG companies. Both the HEG and LEG databases were then compared against each other to ensure that there was no duplication. A total of 189 LEG companies were identified for Ireland and 107 LEG companies for the US.

The questionnaire adopted for the study of HEG/LEG respondents was subject to extensive screening by the research team, tested on government representatives in both countries and pilot tested by 10 entrepreneurs representing both Ireland and the US, so as to take into account cultural variations. Based on their feedback some questions were condensed in size, options were reduced and it was recommended to send a personalized email to each of the potential respondents. With sampling complete, the pilot survey carried out and the questionnaire finalised, it only remained to administer the survey to the chosen sample. The questionnaire was administered through www.surveymonkey.com.

The interviewees for this study were identified from the final question on the online survey, which asked the respondents if they would be interested in taking part in an interview. An interview schedule was designed and focused on probing more deeply into the characteristics and personality traits of the entrepreneurs. The interviews were held between December 2009 and February 2010, at the premises of the interviewee in both Ireland and the US. Each interview lasted approximately 30 – 40 minutes and was recorded using a Dictaphone. In keeping with the method adopted for the qualitative study, multiple sources of data collection such as documents, website and archival records were also used to overcome
the limitations of any individual source if possible. Table 1 below identifies the online response rate and Table 2 identifies the number of interviews conducted in both countries.

Table 1. Response Rate for the Online Survey for Ireland and the US

<table>
<thead>
<tr>
<th></th>
<th>IRISH</th>
<th></th>
<th>UNITED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STATES</td>
<td></td>
<td>STATES</td>
<td></td>
</tr>
<tr>
<td>Issued</td>
<td>373</td>
<td></td>
<td>296</td>
<td></td>
</tr>
<tr>
<td>Wrong address</td>
<td>(128)</td>
<td></td>
<td>(115)</td>
<td></td>
</tr>
<tr>
<td>Other reason</td>
<td>(17)</td>
<td></td>
<td>(11)</td>
<td></td>
</tr>
<tr>
<td>Number of valid respondents</td>
<td>228</td>
<td></td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>Valid response rate</td>
<td>37</td>
<td></td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Valid response percent</td>
<td><strong>16.2%</strong></td>
<td></td>
<td><strong>16.5%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Interview Respondents for Ireland and the US

<table>
<thead>
<tr>
<th></th>
<th>HIGH expectation/growth company</th>
<th>LOW expectation/growth company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>United States</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Findings

As mentioned previously, the aim of this paper is to examine the characteristics of entrepreneurs of high- and low-expectation/growth companies in Ireland and the US and their motivations for start-up. In particular, emphasis is placed on: the demographic profile of the entrepreneur and their business; occupational background; educational attainment; and motivational factors influencing new venture creation.

Demographic Profile of the Respondents

The findings of this study identify two cohorts of respondents: those classified as high expectation/growth (HEG) entrepreneurs of which there were 37 respondents and low expectation/growth (LEG) entrepreneurs of which there were 28 respondents. Table 3 below compares and contrasts the quantitative findings of the HEG and LEG respondents based on gender, martial status and birth order.
Table 3. Profile of the HEG and LEG Respondents

<table>
<thead>
<tr>
<th>Profile criteria</th>
<th>HEG (n=37)</th>
<th>LEG (n=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>89%</td>
<td>96%</td>
</tr>
<tr>
<td>Female</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Martial status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>78%</td>
<td>78%</td>
</tr>
<tr>
<td>Living with partner</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>56%</td>
<td>4%</td>
</tr>
<tr>
<td>Single</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Widowed</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Birth order</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oldest child</td>
<td>35%</td>
<td>39%</td>
</tr>
<tr>
<td>Middle child</td>
<td>27%</td>
<td>32%</td>
</tr>
<tr>
<td>Youngest child</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>16%</td>
<td>11%</td>
</tr>
</tbody>
</table>

As is evident from Table 3, similar findings can be found concerning the profile of the HEG and LEG entrepreneurs whereby, the majority were male, married, and the eldest child. Respondents for the questionnaire and the interviews from Ireland tended to be younger in terms of age of start up when compared to the US. The findings of the interviews reflect the findings above as well. In the case of the HEG interviewees, seven were male and one was female. All LEG interviewees in Ireland and the US were male. In both LEG and HEG cases, there was a balanced view by respondents concerning their parents entrepreneurial background. For HEG respondents, it was found that 36 percent had a father who was self-employed, 8 percent of mother’s were self-employed and 11 percent had both parents who were self-employed. In the case of 45 percent of respondents, they identified that neither parents were self-employed. For LEG respondents, 46 percent have a father who was self-employed and 8 percent identified that both parents were self-employed. The remaining 46 percent identified that neither parents were self-employed. More notable differences existed in terms of the educational profile of the HEG and LEG entrepreneurs as described in Table 4.
Table 4. Highest Educational Qualification Obtained

<table>
<thead>
<tr>
<th>Qualification</th>
<th>HEG (n=36)</th>
<th>LEG (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal qualifications</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>High School or less</td>
<td>3%</td>
<td>26%</td>
</tr>
<tr>
<td>National Certificate</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>National Diploma</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td>Degree or equivalent (BA, BSc)</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Higher degree (Masters, PhD)</td>
<td>58%</td>
<td>18%</td>
</tr>
</tbody>
</table>

As is evident from Table 4 above, three times as many HEG respondents have higher degrees (for example at Masters and PhD level) in comparison to LEG respondents. Some 30 percent of LEG respondents have no tertiary level qualifications whereby only 3 percent of HEG respondents do not. This was further substantiated by the HEG interviewees, who identified that their lowest level of qualification was a postgraduate degree. In the US, the HEG interviewees stated the highest educational qualification attained was a tertiary level award at Masters level, with a high incidence of non-business disciplines being studied. When questioned on the subject area of their qualification, the majority of online HEG respondents identified engineering and electronics, with business being the next most popular subject area. Conversely for LEG respondents, a business related qualification was the most popular amongst this group. Variations also occurred in terms of the number of years prior work experience online respondents had gained and Table 5 highlights the results.

Table 5. Number of Years Prior Work Experience

<table>
<thead>
<tr>
<th>Number of years work experience</th>
<th>HEG (n=36)</th>
<th>LEG (n=26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>5-6 years</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>7-8 years</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>9-10 years</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>10+ years</td>
<td>69%</td>
<td>61%</td>
</tr>
</tbody>
</table>
As Table 5 indicates, the majority of HEG and LEG respondents had 10 or more years work experience prior to establishing their own business. However, the table indicates that there are a number of LEG respondents who went into business without any prior work experience. In the case of Irish HEG and LEG interviewees it was found that they all had 15+ years prior work experience. Interestingly, both the HEG and LEG interviewees in the US indicated slightly lower levels of prior work experience, though the majority had nine plus years experience. When one compares the positions of authority held by these respondents prior to establishing their own business it is evident that HEG respondents were in positions of greater authority and responsibility than LEG respondents. HEG respondents identified that they held President and Vice President positions, CEO’s positions, and/or Director of Sales and Marketing, whereby LEG respondents were Operational Managers, General Managers and team leaders. Oneline respondents were questioned as to whether this was their first business or not and 63 percent of HEG’s and 64 percent of LEG’s indicated it was their first venture. This was further supported by the interviewees as all interviewees in both countries identified that this was their first business venture.

In relation to how the businesses were established, similar findings were found for both HEG and LEG respondents. Some 74 percent of HEG’s and 68 percent of LEG’s highlighted that the business was founded by a team of entrepreneurs. The interviewees gave similar findings as well whereby out of the 13 interviews conducted all bar 3 were founded by teams of entrepreneurs. In relation to industry sector, this study found that high-expectation/growth firms are under-represented in the services sector as only 18 percent of online HEG respondents and one HEG interviewee operate within this sector. The ICT sector was the most prevalent sector for HEG respondents (45 percent of online respondents and four interviewees) and for LEG respondents (50 percent of online respondents and two interviewees). This was followed by the Electronics/Engineering sector as 36 percent of
online HEG respondents and four interviewees, two LEG interviewees and 19 percent of online respondents operating within this sector. The second most common sector for the online LEG respondents was the services sector (25 percent) along with one interviewee indicating this sector.

**Motivations In Establishing The Business**

Respondents were questioned as to the route they took to establishing their business. In the majority of HEG (77 percent) and LEG (68 percent) responses, the route to market was through the formulation of their own business idea. Of those that responded, the event that alerted HEG respondents (n=29) to their business opportunity was primarily based on *observing new trends emerging in the market* with 38 percent respondents indicating this as a route and 39 percent of LEG respondents (n=18) identified this as a route to market. A *niche in the market* was identified by 56 percent of respondents and 35 percent of HEG respondents also chose this as a route to market. Motivations for starting the business were also examined with various and numerous responses emerging through the research findings. Initially, respondents were presented with a listing (as seen in Table 6 below) of push and pull factors and asked to rate the factors based on their level of importance.

**Table 6. Push and Pull Factors**

<table>
<thead>
<tr>
<th></th>
<th>HEG</th>
<th></th>
<th></th>
<th>LEG</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Important</td>
<td>Not</td>
<td>n</td>
<td>Important</td>
<td>Not</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>important</td>
<td></td>
<td></td>
<td>important</td>
</tr>
<tr>
<td>Freedom</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>19</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Realize your dream</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>20</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Be your own boss</td>
<td>34</td>
<td>85%</td>
<td>15%</td>
<td>20</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>Independence</td>
<td>34</td>
<td>100%</td>
<td>0.0%</td>
<td>20</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Autonomy of decisions</td>
<td>34</td>
<td>76%</td>
<td>24%</td>
<td>21</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>Creating something</td>
<td>34</td>
<td>97%</td>
<td>3%</td>
<td>20</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Enjoy advantages from</td>
<td>33</td>
<td>91%</td>
<td>9%</td>
<td>19</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>your creative potential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenges in the job</td>
<td>34</td>
<td>91%</td>
<td>9%</td>
<td>20</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Job security</td>
<td>34</td>
<td>27%</td>
<td>73%</td>
<td>21</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Stable conditions on</td>
<td>34</td>
<td>18%</td>
<td>82%</td>
<td>19</td>
<td>21%</td>
<td>79%</td>
</tr>
<tr>
<td>the job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evidently for HEG respondents, the highest level of importance was placed on “pull factors”, namely “Independence” (100 percent); “Freedom” (97 percent); “Realize a dream” (97 percent) and “Creating Something” (97 percent), followed very closely by other pull factors such as “Challenges in the job” (91 percent); “Enjoy advantages from your creative potential” (91 percent); and “Being your own boss” (85 percent). Conversely, the highest level of importance for LEG respondents was placed on both “pull and push factors”, namely “Independence” (100 percent); “Challenges in the job” (95 percent); “Freedom” (95 percent); “Creating something” (95 percent) and “Realize a dream” (85 percent), followed very closely by other pull factors such as “Enjoy advantages from your creative potential” (90 percent); and “Being your own boss” (70 percent). Both HEG and LEG respondents rated “Autonomy of decision” with a high level of importance, whereby 76 percent of HEG respondents and 67 percent of LEG respondents indicated that this was “important”. Both parties agreed that the least important factors were “Stable conditions on the job” (18 percent HEG and LEG 21 percent) and “Job security” (HEG 27 percent, LEG 33 percent). These findings were further supported by the interviews, whereby interviewees stressed the desire for control and/or the need to create something new.

In addition, the research continued to investigate the specific motivations of the entrepreneurs in starting the business by posing a question influenced by the GLOBE Culture and Leadership Scales (2006). Respondents were presented with 17 statements and invited them to agree or disagree with each of them and Table 7 indicates the results.
Table 7. Motivations for Starting the Business

<table>
<thead>
<tr>
<th>Motivations for starting the business</th>
<th>HEG</th>
<th>LEG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Agree</td>
</tr>
<tr>
<td>I wanted to make more money than I was earning before</td>
<td>21</td>
<td>67%</td>
</tr>
<tr>
<td>I wanted the freedom to adopt my own approach to work</td>
<td>19</td>
<td>90%</td>
</tr>
<tr>
<td>I always wanted to be my own boss</td>
<td>23</td>
<td>83%</td>
</tr>
<tr>
<td>I wanted to get away from discrimination that occurred at my previous</td>
<td>21</td>
<td>10%</td>
</tr>
<tr>
<td>place of employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I wanted the freedom to adopt my own approach to work</td>
<td>20</td>
<td>35%</td>
</tr>
<tr>
<td>I wanted to challenge myself/prove that I could do it</td>
<td>19</td>
<td>90%</td>
</tr>
<tr>
<td>I wanted to continue a family tradition</td>
<td>21</td>
<td>14%</td>
</tr>
<tr>
<td>I was unable to obtain regular suitable paid employment</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>I had been made redundant</td>
<td>18</td>
<td>11%</td>
</tr>
<tr>
<td>I had been out of work for a period of time</td>
<td>18</td>
<td>0%</td>
</tr>
<tr>
<td>I wanted to follow the example of someone I admired</td>
<td>19</td>
<td>26%</td>
</tr>
<tr>
<td>I wanted to develop a hobby into a commercial enterprise</td>
<td>19</td>
<td>16%</td>
</tr>
<tr>
<td>I wanted to make an idea or innovation happen</td>
<td>18</td>
<td>89%</td>
</tr>
<tr>
<td>I wanted to do something that helps/supports other people</td>
<td>18</td>
<td>33%</td>
</tr>
<tr>
<td>I wanted to do something that helps/supports the environment</td>
<td>18</td>
<td>6%</td>
</tr>
<tr>
<td>I wanted my business to be better than my previous employer</td>
<td>18</td>
<td>22%</td>
</tr>
<tr>
<td>I wanted to be able to work from home</td>
<td>21</td>
<td>19%</td>
</tr>
</tbody>
</table>

For HEG respondents it emerged that the highest percentage of respondents indicated that they “wanted the freedom to adopt their own approach to work”, “wanted to make an idea or innovation happen” and “wanted to challenge themselves/prove that they could do it”, accounting for between 89 and 90 percent. These were followed very closely by “always wanted to be their own boss” which counted for 83 percent. These findings were further substantiated in the HEG interviews in both Ireland and the US with interviewees identifying that they “wanted to make an idea or innovation happen” and “wanted to be own boss” being stated as their motivation for starting up their business. Furthermore, 67 percent of HEG respondents indicated that they “wanted to make more money” than they were earning before.

For online LEG respondents and interviewee the greatest motivation in starting the business resulted from the respondents desire for “freedom to adopt my own approach to work” (89 percent), with “I always wanted to be my own boss” (84 percent) as the second most important reason in starting the business. The next most popular response for LEG
respondents was that of “I wanted to challenge myself/prove that I could do it” with 67 percent of respondents answering this question. Both “I wanted to make an idea or innovation to happen” and “I wanted to make more money than I was earning before” were agreed by 50 percent and 56 percent respectively of the LEG respondents who answered this section.

In summary, the findings suggest a slightly higher tendency for HEG entrepreneurs to start their businesses for positive opportunity sensing reasons. That said overall, the motivations for start up for both HEG and LEG do not differ greatly. The respondents were questioned as to whether they were likely to achieve growth within a certain time period and whether the firm was capable of achieving that growth and Table 8 indicates the results.

### Table 8. Growth Aspirations

<table>
<thead>
<tr>
<th></th>
<th>HEG (n=27)</th>
<th>LEG (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on a technological innovation</td>
<td>92%</td>
<td>84%</td>
</tr>
<tr>
<td>Likely to achieve significant growth in 3-5 years</td>
<td>100%</td>
<td>74%</td>
</tr>
<tr>
<td>Export oriented</td>
<td>92%</td>
<td>78%</td>
</tr>
<tr>
<td>Led by an experienced team with a mixture of technical and commercial competencies</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The findings contained within Table 8 above identify that growth is a key imperative for HEG respondents when compared to LEG respondents. All HEG respondents indicated that this was a likely possibility in 3-5 years time when compared to LEG respondent’s views on this (only 74 percent of LEG respondents agreed with this). More HEG respondents are export orientated compared to LEG respondents and more HEG respondents enterprises are based on a technological innovation when compared to LEG respondents.

**Conclusions**

High-expectation/growth enterprises are gaining increased momentum in government policy. However, given their emerging nature, there is a lack of information profiling this subset of entrepreneur or the type of business they operate; separate to the more general population of entrepreneurs. This study has attempted to bridge this knowledge gap. The
findings indicate that some clear differences exist between the HEG entrepreneur and the LEG entrepreneur at the individual level. Firms did not differ greatly in terms of motivations to start up however pronounced differences are identified in the areas of age; education; gender; work experience; industry sector; and each are discussed below.

**Age:** On a global basis, established *high-growth* entrepreneurs are biased towards older individuals and similar findings were found for HEG companies in this study. When one compares the LEG and HEG enterprises there is a similar age difference as well. When one extrapolates the data even more one finds that HEG respondents and interviewees in Ireland tended to be younger in terms of start-up when compared to the US. This indicates that high-expectation/growth entrepreneurs tend to be older in the US which reinforces the emerging nature of high-expectation/growth entrepreneurs in Ireland.

Previous studies support the idea that the age of the entrepreneur has an influence on the growth of the business, where firms owned by younger individuals displayed higher levels of growth. Other research suggests that with an increase in age, the entrepreneur will accumulate knowledge and experience, and will have greater access to and use of networks, which influence subsequent firm growth, thus supporting the idea that older entrepreneurs achieve higher levels of growth. According to the Irish GEM Report (Fitzsimons and O’Gorman 2007) and Autio (2007), individuals are starting businesses at a younger age, thus implying that they will have less previous work experience than older entrepreneurs who may have a greater wealth of experience, have more experience of operating and managing a business and have more established networks which can benefit them in growing a business, in turn impacting on growth of the business.

**Education:** Differences in the type and level of educational award were found within this study. As found by Autio (2007) and Riley (2008) the majority of high expectation/growth entrepreneurs have tertiary level qualifications. The findings of this study
concur with these findings, as HEG entrepreneurs have higher educational awards with a noticeable number at postgraduate and doctoral level and in technical areas relative to LEG entrepreneurs. The benefit of having a tertiary level education results in entrepreneurs not only developing their technical skills but also develops contacts and social capital for the business which can aid in the growth of the business. The results indicate that the majority of HEG respondents and interviewees are emanating from non-business disciplines in comparison to LEG respondents. There are implications here for educational policy makers in that it is imperative that tertiary level educators include entrepreneurship as a field of study within non-business fields. Furthermore, for the supports given by government agencies, they should be cognizant of the fact that HEG entrepreneurs may have no business education or background.

**Gender:** Females globally are under-represented in the high expectation/growth category of entrepreneurs and similar findings were found within this study. In this study it was found that females were sorely under-represented since only 11 percent of HEG online respondents and 3 percent of LEG respondents were female. Interestingly, in the interviews, 22 percent of HEG founders were female, and all LEG founders were male. Further research is required to examine why this is the case in Ireland, the US and/or globally.

**Work experience:** The results of this study highlight that both LEG and HEG respondents have prior work experience prior to establishing their own business. No significant differences were found in terms of the length of work experience. It was, however, interesting that both groups of respondents had 10 or more years work experience prior to establishing their own business. When further examined on their work experience, it was evident that HEG respondents had gained more experience at managerial levels than LEG entrepreneurs. When broken down further, the findings identify that respondents in the US started their high-expectation/growth firm with less prior work experience compared to Irish
HEG entrepreneurs. This could be due to the entrepreneurial culture in the US where entrepreneurs start businesses earlier and there is engendered in people a more entrepreneurial culture in comparison to what is present in Ireland.

**Motivations:** HEG respondents are more motivated to establish a business by ‘pull factors’ when compared with LEG respondents. The motivations for HEG are primarily independence; freedom; realize a dream; creating something new; being one’s own boss and enjoying advantages from creative potential. The key motivations for LEG entrepreneurs are independence, challenges on the job; freedom; creating something and realize a dream. Both HEG and LEG respondents appear not to be highly motivated by helping or supporting the environment, however, this needs to be further researched as a result of the emergence of ‘social entrepreneurs’. More HEG respondents have a greater desire to help and/or support other people more so than LEG respondents. Innovation was a greater motivation for HEG respondents than for LEG respondents. Interestingly, more HEG respondents were motivated to establish their business as a result of redundancy than LEG respondents. In light of the current economic climate it would be worthwhile investigating this further in future studies.

The positive aspirations from the pull factors are important from a policy perspective in that people are interested in establishing high-expectation/growth firms and these should be reflected upon by policy makers and further nurtured and supported by policy in creating awareness and opportunities in creating such firms.

On a broader perspective given the variations in the definitions and characteristics applied to the term high-expectation/growth entrepreneurs there should be ongoing debate about what this term means and how it is interpreted by the practitioner and if there is a policy-practitioner gap in terms of its meaning. This requires further deliberation. Given the variety of perceptions of what a high-expectation/growth firm is, policy makers should take
consideration of the interpretations of the respondents when devising the definition so as to reduce the perceptual gap that exists.

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Business Innovation Triggered by Business Successions:  
Case Studies of Japanese Small and Medium Family Enterprises  

Norio Kubota  

Abstract  
This paper aims to investigate ten cases of Japanese small and medium family enterprises with long business histories, which illustrate business innovation after business successions.  
These case studies make two following contributions.  
First, successors carried out reforms such as organizational changes more focused and updated company visions or management policies or reforms of decision-making and communication processes.  
Second, successors exercise different types of leadership from those of founder’s top-down type to accomplish organizational reforms despite their justified business successions and authorities. The characteristics of the leadership peculiar to successors are “open” management and encouraging employees voluntarily involvement.  
Successors initiate management innovation which has been triggered by business successions, getting supports and understandings among stakeholders while they exercise the leadership peculiar to them and accomplish organizational reforms.  

Introduction  
Business successions are becoming problems in many small and medium-sized enterprises (SMEs) because most entrepreneurs are aging. Promoting business successions smoothly is important not only keeping jobs but skills, technological competence, and know-how.  
Under such circumstances, SMEs that have long business histories are attracting international attentions because they seem to manage business successions.  
Japan is well-known for a number of companies which record long business histories.
According to a survey in August 2009 by Tokyo Shoko Research, that is one of the largest credit research institutions, the number of Japanese companies in business for more than 100 years is around 21 thousand out of 2,130 thousand enterprise database. And 96.0 percent of those companies are SMEs with 300 or fewer workers. One of the reasons why there are so many time-honored companies in Japan is that those companies inherit unchanged traditions, as well as initiate businesses innovations that are suited to times (Yokozawa 2000).

Many Japanese SME owner-managers transfer their businesses to family members. According to a survey on business successions of SMEs in June 2007 by Japan Finance Corporation for Small and Medium Enterprise (JASME), 81.1 percent of the total Japanese SME owner-managers (excluding founders) are family members of previous proprietors (JASME, 2008).

This paper aims to investigate a number of actual cases of Japanese small and medium family enterprises, which illustrate business innovation after business successions.

The case studies show that there are common characteristics that successors carried out organizational reforms before completing business innovation.

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1As the survey shows, most of Japanese SME’s owner-managers tend to choose their successors from their family members. And SME Agency uses the word “Business Successions” in White Paper on Small and Medium Enterprises in Japan. So this paper also uses the term “Business Successions”.
Finally this paper shows the reason why successors carried out organizational reforms. Because successors need to exercise different types of leadership from those of top-down in order to get collaboration among employees and external stakeholders.

**Research Background**

In discussing family business and the business succession, Bird, Welsch, Astrachan, and Pistrui (2002) evaluated importance in the family corporate management with the number of the journal articles about the family business.

The most frequently mentioned subject was about management and strategy. And the second most was about business successions.

Barach and Ganitsky (1995) pointed out that business successions are chances in pursuance of bold innovations and that successors have authorities to perform innovations as owners of the family companies.

On the basis of these previous studies this paper focuses on successions of the management rather than those of ownership and focuses on management innovations triggered by business successions in small and medium family enterprises.

In discussing family business and organizational managements, Sorenson (1999) showed that the most effective way in order to manage conflict within family businesses was high levels of collaboration including relations with family members and business stakeholders.

This previous study teaches that the conflict management is important in family
business and that it is effective to receive collaboration among stakeholders, both inside and outside. On the basis of the study this paper focuses on organizational management in order to get collaboration among stakeholders when observing processes of the management innovations triggered by business successions.

In discussing organizational characteristics of family businesses, their strengths are organizational flexibilities and their limitations are rigid and exclusive organizational cultures and difficulties in organizational changes (Carlock and Ward 2001).

This previous study shows that the organizations of family business have both flexible and rigid characteristics. So this paper has the viewpoint that successors need to brake down organizational rigidity in order to initiate business innovation triggered by business successions.

According to the already-described survey by JASME, the percentage of the Japanese SME owner-managers who established new management system within 10 years is higher in successors (non-founders) than in founders and higher in owner-managers who succeeded their businesses after 2001 than in those who did before 2000 (JASME 2008).

On the basis of these previous studies the basic proposition of this paper is that successors need to make organizational changes in order to initiate business innovation triggered by business successions.
Research Methodology

This paper mainly draws on evidence from two qualitative research projects, sponsored by the Japan Finance Corporation (JFC) (the name of the organization was changed from Japan Finance Corporation for Small and Medium Enterprise (JASME) in October 2008), Tokyo, which were carried out in 2007 and 2009. Each consisted of 17 and 6 case studies based on interviews with owner-managers who initiated business innovation after business successions. Their reports were published in Japanese (JASME 2008) (JFC 2010).

10 cases were extracted from the cases described above. Conditions for the extracted 10 cases were that their business establishments with 300 or fewer workers (100 or fewer in wholesaling and services, 50 or fewer in retailing and restaurants) as defined under the revised 1999 Small and Medium Enterprise Basic Law in Japan, their business histories are for more than 50 years, and that the successors are family members of previous proprietors.

| Cases A | Socks Manufacturer | 22 | 1960 | Second Son |
| Cases B | Gear Wheel Manufacturer | 90 | 1935 | Nephew |
| Cases C | Electrostatic Painting | 100 | 1947 | Son-In-Law |
| Cases D | Vinegar Manufacturer | 100 | 1876 | Oldest Son |
| Cases E | Dried Bean Curd Manufacturer | 86 | 1940 | Wife |
| Cases F | Festival Article Production | 30 | 1910 | Oldest Son |
| Cases G | Connector Manufacturer | 61 | 1912 | Younger Brother |
| Cases H | Soapmaker | 140 | 1908 | Oldest Son |
| Cases I | Printer | 50 | 1921 | Son-In-Law |
| Cases J | Common Carrier | 98 | 1935 | Son-In-Law |

Table 1
A List of Cases
Case Studies

Three typical cases out of ten cases that successors initiated business innovation after business succession are shown with paying attention to their organizational changes.

Cases B

This company produces and sells gear wheels. It is a successful company for standardization of the production of gear wheels which are build-to-order manufacturing.

The present owner-manager is the fourth of the company and is the eldest son of the second one and is a nephew of the third one who was younger brother of the second owner-manager. It means that the present owner-manager is in the third generation. The present owner-manager succeeded its presidency in 2001 when he was 39 years old due to the age and health reason of the third one.

After becoming its president, he carried out a large scale renovation of the main office factory. The purpose of the renovation was to introduce a new production method in order to diversify its products, not only standard gear wheels but also build-to-order ones. And he started a sort of the after-sale service which offers after sales improvements of products.

Under the second and the third owner-manager’s management, decision making of
the management was made by hunches. The approach was not based on concrete
grounds such as laws, logics and numerical values.

Under the fourth owner-manager’s management, many family members participate in
the management and employees in the previous generation remain, too. It means that the
more in-company human relations become the more generations are. Therefore
transparent and persuasive way is necessary for decision making of the management.

The present owner-manager is aware of the necessity of open organization
administration based on data and of power sharing with other administrators. For
example he explains the managerial decisions in front of all employees three times a
year. He holds meetings with managers after having shown financial statements
although the former owner-manager did not show even its profits. He tries to have direct
communication with many employees and show the business plan or his own schedule
to employees openly.

Cases F

This company began operation in 1910 and ran a clothing store. It began to sell
various kinds of products to be used *Matsuri* (Japanese downtown festivals) during
special events of the department store in 1960's but those products were only the
seasonal goods which were sold only for the limited period of the festival.

The present owner-manager is the third of the company and is the eldest son of the
second one and is a grandchild of the founder. He entered the company in 1987
intending to succeed its presidency. The textile industry was chronic recession in those days.

He paid attention to Japanese downtown festival goods when he was the executive director. First he began to produce the festival goods on its private-label basis in suppliers and sell them at its own stores or by mail orders, instead of laying in a stock and selling them. He adopted the business model of the apparel maker to plan and design its private brands and to produce in suppliers.

Then he thought that he could switch its merchandise from seasonal goods to those which were sold all year round by targeting festivals all over Japan. So he collected the schedule of the national festivals for the data and built a database managing goods, customer information, purchasing records according to each festival.

In 1991 he established the communication sales department and began a full-scale mail order of the festival goods. By this action, the sale spread out in the whole country. He changed the company’s main business from the clothing retailer to the specialized store of Japanese festival goods when his father was the owner-manager.

He succeeded its presidency in 2003 when he was 48 years old due to health reason of the second owner-manager.

The main bank and clients welcomed the change of the owner-manager because they appraised the management innovation that the present owner-manager performed in his executive director times.
Under the former owner-manager’s management, he dictated its business. It was a problem that management was not based on plans or figures.

On the other hand the present owner-manager made a management plan based on figures and pushed forward rules of the accounts processing standard and organizational rules. He also pushed forward reforms of the personnel system such as work rules and the holiday system. In addition, he held business meetings with monthly trial balance reports and tried to share the management information. And he tried to foster the executives whom they could make decisions by themselves.

**Cases G**

This company produces and sells modular rosettes and various connection terminal boards for the telecommunication industry.

The present owner-manager is the fourth of the company and is the second son of the second one and is a younger brother of the third owner-manager who is the eldest son of the second owner-manager. It means that the present owner-manager is in the third generation.

The present owner-manager succeeded its presidency unexpectedly in 1991 when he was 42 years old due to health reason of the third owner-manager.

This company had performed the original equipment manufacturing (OEM) of main bodies of telephone since the first half of 1980's. However, when he succeeded its
presidency, the OEM business was very hard because cost competition intensified by deregulation.

The present owner-manager opposed to the OEM of main bodies of telephone from the beginning. When this company began the OEM business, his father who was the second owner-manager had still a big influence on the company although his elder brother was the owner-manager. Because his father wanted to promote the OEM business, his opinion was not taken at all. Therefore he had nothing else to do but following his father's policy.

However, he wanted to show his own leadership once he succeeded the business. Therefore he became the owner-manager under the condition that his father retired from management.

He decided the withdrawal from the OEM business in 1991 just after he became the owner-manager. He disposed of its production facilities and the unused assets for about one year and a half.

Instead he started a modular jack business in 1992 in order to put up the pillar of a new business because a modular of the telephone connection started just at that time.

He tried to switch to research and development type business after having succeeded in the mass production of the modular jack.

He publicly stated of disposing of assets and launching a modular jack business to employees as a Five-Year Plan just after he became an owner-manager. Because that
helped information-sharing in the company, the disposal of assets advanced smoothly.

He shared crisis awareness with employees and pushed forward reform together and it led to smooth business change.

He was an engineer originally, but he stopped being a technical expert after he became the owner-manager. He transferred his own technical know-how of the production to employees and transferred authority and he devoted himself to management such as the finance. He succeeded in changing employees into people to act voluntarily by transferring authority.

**Results: Overall Characteristics of the Cases**

From the cases of SMEs, several factors can be singled out.

In business successions between families, it is likely that successors intend to succeed businesses in the future. And in many cases, successors enter the same company of the previous proprietors and sometimes work with them. So successors are easy to be accepted about succeeding its presidency by employees, banks, and clients.

However, successors of the cases, who initiated business innovation such as changing in their business models as the successors of small and medium family enterprises, carried out the following organizational reforms despite their justified business successions and authority.
1. **Organizational Changes More Focused and Updated Company Visions or Management Policies**

   Successors made organizational changes more focused and updated company visions or management policies to employees and other stakeholders and showed strong determination to management innovation when they succeeded businesses.

2. **Minute Communication with Employees and Outside Stakeholders**

   Successors performed minute communication with employees and outside stakeholders before and after business successions. And successors showed concrete grounds based on theories and numerical values during communication.

3. **Reforms of Decision-Making and Communication Processes**

   Successors reformed decision-making and communication processes with business successions to perform organized decision making.

4. **Training and Awareness Raising among Employees**

   Successors trained their middle managements or core engineers and encouraged awareness.

5. **Clarification of the In-Company Rules**

   Successors clarified in-company rules with business successions and built the mechanisms to enforce the rules.

   Then why did successors carry out organizational reforms when they initiate business innovation triggered by business successions? The answer is related that ways of
leadership exercising by successors are different from that of leadership exercising by previous proprietors.

Founders and owner-managers in the second generation who can be said to be virtual founders tended to have characteristics such as "typical charisma", "autocratic leadership", and "leadership of the top-down type".

It is rational that founders or virtual founders have such characteristics when they push their ideas into organizations, showing their creativity and foresee ability.

However, successors do not generally hold the power and control of all companies in comparison with founders who founded the company from the beginning. And it is necessary for successors to get supports and understandings among in-company stakeholders such as senior employees who know about their companies well and among outside stakeholders such as banks and clients.

Thus, the style of the leadership of successors becomes peculiar to them while they initiate business successions and carry out organizational reforms.

Unlike the founders or virtual founders having shown autocrat or top-down type-like leadership, the following characteristics were seen in the leadership of successors.

1. “Open” Management

Successors made organizational changes more focused and updated management policies to employees, digitized management information, and shared management information with employees. They aimed at the “open” management based on shared
management information.

In addition, decision-making and communication processes were changed by “open” management, too. Once, managers’ roles were to confirm the judgments of the owner-managers and to transmit them to the organizations. In “open” management, on the other hand, managers controlled the situation of their charge posts and shared the information with other departments.

2. Encouraging Employees Voluntarily Involvement

Successors did not perform all by themselves. They transfer power to employees. They carried out organizational reform that changed the atmosphere of obeying the instructions of autocratic founders by encouraging employees voluntarily involvement.

According to visions, policies, and ideas that successors showed, employees thought voluntarily and brought about new ideas. And this became the base of new management innovation.

Conclusions and Implications

In these case studies, there are several management innovation triggered by business successions in Japanese small and medium family enterprises that have long business histories.

These case studies make two following contributions.

First, it showed that successors carried out organizational reforms when they initiate management innovation such as changing in their business models. The characteristics
of organizational reforms are organizational changes more focused and updated
corporate visions or management policies, minute communication with employees and
outside stakeholders, reforms of decision-making and communication processes,
training and awareness raising among employees, and clarification of the in-company
rules.

Second, successors exercise different types of leadership from those of founder’s
top-down type to accomplish organizational reforms despite their justified business
successions and authorities. The characteristics of the leadership peculiar to successors
are “open” management and encouraging employees voluntarily involvement.

Successors initiate management innovation which has been triggered by business
successions, getting supports and understandings among employees and among outside
stakeholders such as banks and clients while they exercise the leadership peculiar to
them and accomplish organizational reforms.
Figure 1
Model of Successors’ Leadership and Organizational Reforms

The Leadership of Founders
- Typical Charisma
- Autocratic Leadership
- Top-Down Type

The Leadership of Successors
- “Open” Management
- Encouraging Employees Voluntarily Involvement

Organizational Reforms
- Organizational Changes More Focused and Updated
  Company Visions or Management Policies
- Minute Communication with Employees and Outside Stakeholders
- Reforms of Decision-Making and Communication Processes
- Training and Awareness Raising among Employees
- Clarification of the In-Company Rules

In-Company Stakeholders
Supports and Understandings among Employees

Outside Stakeholders
Supports and Understandings among Banks or Clients

Business Innovation Triggered by Business Successions
References


Social Capital as a Catalyst: Enabling Effect on Organizational Levers for Corporate Entrepreneurship

by François Goxe and Céline Viala

Dwelling on entrepreneurship, organizational and social capital literatures, this paper explores the effects of structural, relational and cognitive social capital upon organizational levers (HR management, culture, structure, control, resources, communication, information system) at different stages of the corporate entrepreneurial process (opportunity recognition, project design and implementation). We argue that different kinds of social capital will impact different organizational levers at different stages of the corporate entrepreneurship process. We conclude with implications for theory, limitations and perspectives for future empirical research.

Corporate entrepreneurship (CE), defined as the birth of new businesses within organizations (corporate venturing) and the transformation of organizations through the renewal of the key ideas or assumptions on which they were built (corporate renewal) (Chung and Gibbons 1997), used to be the exclusive territory of engineers and top managers in large firms. It is now increasingly encouraged among managers, regardless of their position and the size of the organization. Among small firms, where resources are scarce, such initiatives appear crucial (Baron and Markman 2003) yet remain mostly unexplored by research. Specifically, Dess et al. (2003) suggested that the role of social exchange, including the importance of social capital, represents one of the major issues scholars can pursue to further understanding about CE. The critical importance of social networks – social capital – on the development of CE has been acknowledged in large firms (Starr and McMillan 1990; Zahra et al. 1999) but there is still little evidence in smaller ones. Moreover, a distinct literature (Guth and Ginsberg 1990; Covin and Slevin 1991; Lumpkin and Dess

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1996; and Antoncic and Hisrich 2001) has also identified various organizational levers inspiring and enabling CE: culture, structure, HR management, control, information system, communication, resources. The relation between organizational and social literatures is still to be established. Dwelling on existing studies (Hornsby et al. 1993) suggesting there may be consistent organizational and social characteristics that lead to intrapreneurial behavior, this study seeks to explore the effects of social capital on organizational levers for CE. Extant literatures and empirical evidence from SMEs on social capital and CE are employed in order to investigate one primary research question: How can social capital contribute to CE? Specifically, how can structural, relational and cognitive dimensions of social capital (Nahapiet and Ghoshal 1998) facilitate and enhance organizational levers for CE? First, we propose to review prior research on organizational levers for CE and on social capital and CE through three dimensions: structural, relational and cognitive. Potential impacts of these dimensions on organizational levers for CE are then empirically observed and analyzed at different stages of the process: opportunity recognition, project design and implementation. We eventually provide a clearer understanding of social capital dimensions and CE and offer a framework relating social and organizational elements enabling CE.

**Corporate entrepreneurship as an organizational process**

**Defining corporate entrepreneurship stages**

Extant literature defined the creation of new ventures, outside or inside existing organizations, as a stage process (Wilken 1979; Greve and Salaff 2003; Shane and Venkataraman 2000). Wilken (1979) recognizes three phases: 1) the *motivation phase*, where entrepreneurs discuss the initial idea 2) the *planning phase*, where they get the necessary knowledge and resources to test ideas and get support to set up a firm, and 3) the *establishment phase*: where they establish and run a venture. Similarly, Shane and Venkataraman (2000) suggested three stages: 1) the *existence of entrepreneurial opportunity* 2) the *discovery of entrepreneurial opportunities*, and 3) the *decision to exploit entrepreneurial opportunities*. In the same way, we can identify three stages for CE: 1) the
opportunity recognition phase, where intrapreneurs identify ideas and business opportunities 2) the design phase, where they prepare for the new project and acquiring information, knowledge, resources and network to, and 3) the implementation phase, where they deploy the project within the organization.

**Figure 1: Corporate entrepreneurship stages**

Levers for corporate entrepreneurship

During these stages, organizations resort to “levers” for CE, that is organizational dimensions, elements that are vital parts of forming and effectively using a CE strategy. Ireland et al. (2006) identify four levers (human resources management, culture, structure and control) that enable an organization to develop sustainable entrepreneurial behavior as the path to improved performance. We previously augmented this model by adding communication, resources and information system to the existing levers (Viala et al. 2009) (Figure 2).

**Figure 2: Organizational levers for CE (Ireland et al. 2006 and Viala et al 2009)**
The model takes into account two units of analysis: the corporate entrepreneur in relation to other members of the organization (social capital) (in particular within communities of practice), and the extended organization (in interaction with customers, suppliers and other stakeholders). Descriptions of these levers are presented in the following paragraphs.

**HR management**

HR Management comprises four themes: HR orientation, management support, training and rewards. HR orientation corresponds to the principles of HR management and managerial values and translates into the recruitment and promotion of employees that are flexible, risk-taking, committed to innovation (Ireland et al. 2006) and oriented towards efficiency (Pinchot 1984; Burgelman 1983). Recruitment is based on the principle of diversity, which fosters creativity (Milliken and Martins 1996; Amabile 1996). Management support consists in building trust and the development of employees' creative and innovative potential (Mohanty 2006; Cooper 1988; Cumming 1999) through empowerment (increase in workers' responsibility and involvement), openness (Eesley and Longnecker 2006), continuous learning (Carrier 1997) and the inclusion of innovative and risk-taking initiatives in evaluation and recognition criteria (Ireland et al. 2006). Managers' commitment is essential as the likelihood of success and the impact of innovation are related to their involvement in the CE process (Manimala et al. 2005, Kelley et al. 2005). Those managerial characteristics have a strong influence on the “organizational climate which favors creativity” (Ekvall et al. 1995). Training enables employees to broaden their knowledge and skills, position themselves in a change dynamic that is essential to creativity and innovation (Kuratko and Montagno 1989; Mohanty 2006;). Knowledge sharing fosters a strong interest in improving performance among individuals and the organization as a whole (Amabile 1997; Hamilton 2008). Those practices pave the way for collective learning and foster an open and continuous dialogue, which favors creativity (Botcheva et al 2002) and CE. The celebration and reward process, acknowledging progress and performance at different stages, encourages individuals to develop creativity for the sake of the organization (Mohanty 2006; Cumming 1999; Kelley et al. 2005;
Rewards can be extrinsic (wages, bonuses...) and/or intrinsic (public or private recognition...) (Wunderer 2001). The intrinsic rewards are generally more efficient, personal achievement (Carrier 1997) often being the main motivation for employees' actions (Cummings and O'Connell 1978). In a nutshell, the diversity of skills, the development of training schemes and a policy that rewards risk-taking help build trust and foster CE (Amabile and Gryskiewicz 1989).

**Culture**

Organizational culture can foster CE (Wunderer 2001; Carrier 1997) by encouraging some flexibility in the organization (Russell and Russell 1992; Amabile et al. 1996) and the removal of bureaucratic barriers (Stephen et al. 2008). It can foster innovation and continuous improvement (Russell and Russell 1992; Ireland et al. 2006; Kelley et al. 2005), the search for innovative opportunities, risk taking (Russell and Russell 1992; Mohanty 2006; Cumming 1999) and the promotion of autonomous behaviors (Burgelman 1983). It can also inspire to accept setbacks and errors (Burgelman and Sayles 1986; Tushman and Nadler 1986; Hornsby et al. 1999; Singh 2006) and put an emphasis on future results (Ireland et al. 2006).

**Structure**

Organizational structure can significantly foster CE (Tushman and Nelson 1990; Covin and Slevin 1989; Dess et al. 1999) provided it is decentralized and distinguishes different business units (Taylor 2001) for more autonomy and initiative (Burns and Napier 1994). Ireland et al. (2006) advocate for horizontal rather than vertical structures, enabling cross-fertilization processes. Theoretically, organizations adopting a CE strategy should thus be decentralized, limit formal procedures and encourage flexibility (Covin and Slevin 1989; Barrett and Weinstein 1998).

**Control**

Control is closely linked to structure. As part of CE, control processes should emphasize control over outputs (by assessing the number of new projects launched for instance) as the controllers (managers) may not have complete knowledge of what corporate entrepreneurs / employees do. Indirect control over inputs such as self-monitoring should be encouraged (Singh 2006). MacMillan
(1986) and Zahra (1991) insisted on the inhibiting effect of excessive formal controls. Positive control is linked to measurements of performance and focus on the generation and sharing of knowledge/information that enables employees and managers to identify problems before they crop up. Control should strike a balance between flexible, indirect, control of inputs encouraging action and tighter direct control of outputs fostering consistency (Ireland et al. 2006). Ireland et al. (2006) recommend an emphasis laid on control so as to encourage employees to accept risk related to corporate entrepreneurial behavior. Ireland et al. (ibid.) also suggest that control be based on the absence of surprise, self-monitoring and information sharing. Likewise, Sathe (1988) recommends constructive control, avoiding irresponsible behavior and acknowledging CE-related risks. Control should encourage the corporate entrepreneur to move on with his/her ideas while limiting the risks incurred by the enterprise through a number of non-negotiable rules.

*Communication*

Communication is an essential element to promote CE (Zahra 1991; Tushman and Nadler 1986; Kanter 1989; Russell 1999 Kelley et al. 2005). It is important to broadcast clear messages and have fluid and open communication at all levels in order to foster knowledge capitalization, learning and innovation (Kanter 1984; Pinchot 1985). Internal and external communication help promote and spread entrepreneurship.

*Resources*

Human, financial, tangible and intangible (time, information, knowledge,….) resources are essential to conduct innovation (Tushman and Nelson 1990; Mohanty 2006; Kuratko and Montagno 1989). Corporate entrepreneurial projects consume resources (Covin and Slevin 1991) and a company's ability to develop innovative projects will be restricted by available assets. Organizations have to recruit and/or promote creative personalities (Brand 1988; Mnisri 2007), as people are the essential resource for detecting opportunities. Material and financial resources play a role rather in the implementation of ideas.

*Information systems (IS)*
IS can help bring about ideas and progress (Eesley and Longenecker 2006) or share information (Covin and Slevin 1989; Barrett and Weinstein 1998). Technological interactions can foster information sharing (Kao 1996; Cooper 2003). IS facilitate interactions through computerized communication networks, groupware, management systems... Limited research has yet been conducted on the influence of IS on CE (Hamilton 2008).

**Corporate entrepreneurship as a social process**

Organizational aspects do not take place in a vacuum, corporate entrepreneurs are embedded in a social context / relationships. These relationships / social capital can provide entrepreneur wannabes with business ideas and opportunities (Krackhardt 1995; Dacin et al. 1999), but also impact business development and growth (Aldrich and Zimmer 1986; Greve and Salaff 2003). The following section therefore offers to link organizational and social factors of CE.

**Corporate entrepreneurship and social capital**

The driving idea of social capital theory is that “relationships constitute a valuable resource for the conduct of social affairs” (Nahapiet and Ghoshal 1998). The literature on social capital in entrepreneurship (Hoang and Antoncic 2003) generally argues that social relationships may present social capital, “the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit” (Nahapiet and Ghoshal 1998: 243), providing benefits to individuals and their organization. Although, in the context of (corporate) entrepreneurship, researches have investigated the potential impact of social capital upon various facets / stages of the process, the emphasis is almost systematically on the influence of social relationships on the overall process and its performance. Studies have indeed emphasized social capital (often considered broadly as social relationships), as promoting individual creativity, creative business strategies, solutions to business problems, or changes to processes (Perry-Smith and Shalley 2003). Other researches (for example Amabile et al. 1996; Woodman et
al. 1993) have explained these influences as part of a larger “social context”, promoting risk taking, autonomy and competition (Amabile 1988; Woodman et al. 1993) and potentially providing resources and support for individual creativity, acting as a “conduit” for the communication of ideas, knowledge and information (Amabile 1988; Woodman et al. 1993), alternatives, solutions and ideas (Amabile et al. 1996; Kanter 1985), penetrating the organization through individuals' social networks. Although the general causes and effects of social relationships upon the overall (corporate) entrepreneurship process have therefore been investigated, little is known about the mechanisms at work during the process, notably how social capital and organizational levers may interact. Some studies have introduced the idea that only specific ties may be beneficial to creativity and subsequent corporate entrepreneurial stages (project design and implementation). For example, Floyd and Woolridge (1999) proposed that structural characteristics such as centrality account for an individual's ability to acquire novel information). Others have proposed to investigate how social networks / social capital can contribute to later stages of entrepreneurship, namely project design and development, focusing on the selection of ideas and their transfer into projects (Brown and Eisenhardt 1995). However, this literature hardly addressed the social processes involved (Kijkuit and Van den Ende 2007: 864) and the role networks play in (corporate) entrepreneurship remains largely unexplored (Jones 2005). Models addressing some specific facets or the general influence of networks and social capital on CE exist but a comprehensive framework combining the influence of these elements considered along the dimensions defined by the literature on social capital and organizational aspects of CE is yet to come. As research on corporate entrepreneurship and social capital remains highly fragmented, we propose to deploy Nahapiet and Ghoshal's (ibid.) synthetic framework of analysis in order to better understand the potential influences of social capital upon organizational levers designed to foster the corporate entrepreneurial process, at different stages of this process.

**Dimensions of social capital (Nahapiet and Ghoshal's framework)**
Dwelling on Granovetter's distinction between structural and relational embeddedness (Granovetter 1985), Nahapiet and Ghoshal (1998) have defined social capital along three dimensions: structural, relational and cognitive.

**Structural**

The structural dimension of social capital refers to “*the overall pattern of connections between actors*” (Nahapiet and Ghoshal, ibid.: 244). This dimension determines the presence or absence of ties between actors, the network configuration in terms of measures such as density, connectivity and hierarchy, and the strength of ties (strong vs. weak, depending on frequency, intensity and reciprocity of interactions) (Granovetter 1973; Marsden and Campbell 1984; Moran 2005; Hite 2005).

**Relational**

The relational dimension of social capital describes “*the kind of personal relationships people have developed with each other through a history of interactions*” (Nahapiet and Ghoshal, ibid.: 244), the quality of actors’ personal relations formed and maintained mostly on a discretionary basis and only partially affected by the formal hierarchy in the organization. The relational dimension typically comprises trust and trustworthiness (Galunic and Moran 2000; Tsai and Ghoshal 1998) developed through particular relations such as friendship.

**Cognitive**

Cognitive social capital comprises “*those resources providing shared representations, interpretations, and systems of meaning among parties*” (Nahapiet and Ghoshal, ibid.: 244). The cognitive dimension of social capital describes the perceptions made by individuals on others as well as the perceptions that they receive from others: “*the shared vision and goals, and the collectively held values that underlie them, help promote integration and create a sense of shared responsibility and collective action*” (Leana and Pil 2006, 354).

The three dimensions interact among themselves. Tsai and Ghoshal (1998) found, for instance, that the structural and cognitive dimensions positively influence the relational one (strong ties can foster
the development of trust and actors' perceived trustworthiness, major manifestations of the relational dimension. Besides, common values and a shared vision, major manifestations of the cognitive dimension, can encourage the development of trusting relationships). The following figure (figure 3) shows some p interactions.

**Figure 3. Social capital dimensions** (adapted from Tsai and Ghoshal 1998)

![Diagram of social capital dimensions](image)

1. Trust and trustworthiness can create new ties and/or strengthen existing ones
2. Centrality and strength of ties can foster trust and perceived trustworthiness
3. Frequent interactions can foster shared understanding, interpretations and visions
4. Shared visions can strengthen existing ties
5. Trust and trustworthiness can foster the development of shared visions
6. Shared visions strengthen trust and trustworthiness

**Methodology**

Based upon this extensive literature review, we question how the different dimensions of social capital facilitate and enhance organizational levers for CE. The empirical part of this study draws on qualitative case-study methodology (Eisenhardt 1989). Our research was exploratory in nature and rooted in Eisenhardt’s (1989) interpretive methodology, which allows theory and data to interact and influences methodological choices. This study began with a review of literature and the construction of the conceptual framework from Ireland et al.’s model (2006). As Jones (2005) notes, detailed qualitative studies examining how social capital facilitates or restrict the activities of corporate entrepreneurs are scarce although “systematic qualitative research” is frequently advocated (for example Hitt and Ireland 2000). Our research question on how social capital contributes to CE requires a qualitative method based on case studies which take the context into account (Yin 1989; Miles and Huberman 2003; Eisenhardt and Graebner 2007). Three extensive
case studies were conducted in small-sized organizations (SMEs and associations) in the banking and finance industry in France during three years of participant observation. The first case was a consulting firm specialized in finance launching a new offer designed by operational managers. The second case was an association, comprising a thousand members in the financial field, implementing a CE policy and that developed eight CE projects in three years. The third case consisted in the set up of a three-year strategic plan for CE by another financial association. To enhance validity, data were collected through multiple sources: thirty-six-month participating observation, semi-directive interviews, questionnaires and internal documents. The content analysis was performed in a thematic way (Romelaer 1999) with research software Nvivo, themes coming from literature and on-site studies. As no formal structural analysis of social networks was conducted here, only partial propositions based upon researchers' observations and literature reviews will be made. As direct relationships may be absent between actors, indirect ways of obtaining information such as monitoring become a preferable information-gathering conduit (as opposed to the structural approach), researchers may rely on observations and second-hand information-gathering techniques to obtain information (Shah 1998).

Results

HR management

Observations show that the relational dimension of social capital has a particular influence on HR Management at all stages of the CE process. During the Opportunity Recognition stage, relational social capital, considered as the quality of the manager's personal relations with his/her employees (potential corporate entrepreneurs), manifested by friendship ties and trust, promotes creativity and employees' detection of opportunities. Relational social capital acts notably upon employees' perception of HR orientation, organizational values, and reward system. Employees are likely to seek novel ideas as they are intimately convinced that innovation and risk taking will be rewarded (not punished) and that the organization recognizes and values novel ideas. These
perceptions are strongly influenced by informal discussions with coworkers and managers considered as trustworthy, acknowledging and embodying the effectiveness of an HR policy valuing entrepreneurial initiatives. To a certain extent, managers considered as friends, act as role models and advisers. Likewise, at project design stage, employees are more likely to communicate new ideas and participate to CE trainings in so far as they have developed strong, trusting relationships with managers. Conversely, managers are more likely to champion projects from collaborators they have established friendship, trusting relations (relational social capital) with and use their superior (that is more central) position within the organization (structural social capital) to leverage internal network ties in order to support the project, gain acceptance from at least a few decision makers. Managers will also be more likely to curb (administrative, institutional, technical...) restrictions that might inhibit project design and implementation. At this stage, the quality of ties between employees and their managers and/or other members of the organization (colleagues, experts,...) enable the former to gather (material, financial and non material) resources –information, time, network and knowledge (expert skills), test and consolidate their idea, craft a business plan, if needed, to implement the project. At project implementation level, the quality of the relation of the corporate entrepreneur (and/or their manager) with the champion (a leading member of the organization) is essential. The champion acts as a facilitator to limit (technical, relational or institutional) hindrances and foster the development of the project.

P1: Relational social capital promotes HR management at all stages of the CE process.

P1a: At Opportunity Recognition stage, relational social capital, trusting relations with managers, fosters employees' positive perception of HR orientation, organizational values, and reward system

P1b: At Project Management stage, relational social capital contributes to build management support (and therefore resource acquisition, idea validation and acceptance)

P1c: At Implementation stage, relational social capital contributes to build management support (and therefore limit (technical, relational or institutional) hindrances)
Culture

The cognitive dimension of social capital has a particular influence on organizational culture during the opportunity recognition and project design phases. Cognitive social capital generates shared representations which underlie CE values. At opportunity recognition level, shared beliefs in the organization's support (beliefs reinforced by relational social capital developed with managers) and success stories (transmitted and legitimized by trusted managers) encourage employees to suggest new ideas without fear of sanctions. Hamilton (2008) offers to create an open environment which would encourage responsibility and where corporate entrepreneurs would control the contents of their projects and the processes. The development of a corporate entrepreneurial culture lies in the development of a common vision that favors synergy, personal investment, participation and thus creativity and innovation (Burns and Napier 1994). Shared beliefs and vision encourage information sharing which in turn has an influence on idea generation (Cummings and O’Connell 1978; Woodman et al. 1993). Besides, at later stages, shared beliefs and vision foster exchanges, cooperation (Wunderer 2001) and teamwork (Ireland et al. 2006; Manimala, Jose and Thomas 2005). Culture is thus a social structure (Chung and Gibbons 1997) in so far as it usually comes together with standards, values and creeds (cognitive social capital) that a community develops over time (Marcoulides and Heck 1999; Schein 1985), a "social glue" that links organizational participants to one another, even in the absence of direct ties. It allows them to increase their knowledge on the way technologies, products and organizational dynamics interact to provide opportunities (Bogner and Thomas 1994). Cognitive social capital generates a culture, an ideology, that socially underlies the adoption of a corporate entrepreneurial dynamic.

P2: Cognitive social capital forms the basis of CE organizational culture, particularly determinant in the Opportunity Recognition and Project Design phases.

P2a: At Opportunity Recognition stage, cognitive social capital fosters organizational trust and information sharing

P2b: At Project Design and Implementation stages, cognitive social capital foster exchanges,
cooperation and teamwork Structure

Formal structure partially reflects the structure, configuration, of informal social networks, that is the structural dimension of social capital. If managers' formal hierarchical position accounts for a major part of their centrality in informal social networks (Krackhardt 1990), individual's power and centrality in the organization are conversely partly determined by their power and centrality in informal networks (structural social capital). Formal structures assign people to different roles and positions in order to reap the benefits of division of labor, to reduce uncertainties and to improve efficiency and coordination whereas informal interpersonal relationships are more driven by individuals’ attributes, resources and purposes, which may differ from the formal organizational goals and relationships (Podolny and Baron 1997; Ibarra 1993). The prescribed nature of formal structures and formal relationships should (ideally) align with the flexibility of informal structures and relationships (Tong 2003). The organization structure is the enterprise's skeleton while the informal one is its central nervous system (Krackhardt and Hanson 1993). The formal structure manages known process, while the informal structure, highly adaptable, can help deal with uncertainty and unexpected problems (Krackhardt and Hanson, 1 1993).

Structure plays a particularly determinant role in the 1st and 3rd phases of the CE process by allowing employees' autonomy and increasing resource sharing (Kanter 1984). Employees are more able to detect opportunities through the various weak links established with people they may not be formally connected with (structural dimension of social capital). In addition, the limited number of rules and procedures in those structures increases autonomy, allowing people to try innovative solutions and exchange information within the organizational borders (Zaltman et al. 1973). Horizontal interactions are encouraged, which makes the organization more easily adaptable (King 1990).

At CE project implementation level, a decentralized organizational structure, relying on informal relations rather than formal ones, fosters participation from managers concerning the decision-making process of innovative projects and the allocation of resources, which in turn contributes to
increase their commitment to CE and thus makes implementation more efficient (Cohn 1981; Kim 1980).

The informal structure makes it possible to exchange information more easily and go beyond organizational hindrances. It impacts learning, information exchanges and initiative (Chung and Gibbons 1997; Floyd and Wooldridge 1999; Kijkuit and Van den Ende 2007). It favors CE 1) by encouraging information exchanges to detect opportunities 2) by improving organizational learning through obligations and generated trust, 3) by fostering entrepreneurial action taking through standards and sanctions (Chung and Gibbons 1997). Weak links with other organization members and outsiders fosters creativity and the detection of opportunities (Perry-Smith and Shalley 2003) provided the organizational structure is decentralized. However, having too many weak ties is harmful to the development of ideas as individuals then spend too much time maintaining their network instead of integrating and deploying them. CE can, a priori, be developed in any structure, however, it will be strengthened by a decentralized formal structure and informal interactions enabling to uncover and deploy ideas at various organizational levels (Ireland et al. 2006).

P3: The informal structure makes up for the shortages of the formal one: sparse social networks (with low density, numerous weak ties) increase the flexibility of formal structures.

P3a.: At Opportunity Recognition stage, weak ties (structural social capital) facilitate opportunity recognition provided the organizational structure is decentralized.

P3b: At Implementation stage, weak ties (structural social capital) fosters managers' participation and commitment provided the organizational structure is decentralized.

P3c: At any stage, a balance has to be established in the number of weak ties to avoid an overload of (formal and informal) relations.

Control

Control plays a particular role in the last two stages of CE: in the validation of ideas / project design and the implementation of the project. Relational social capital influences control. The
organization's and managers' trust in employees impacts control both qualitatively and quantitatively. Structural social capital also impacts control given the subordination and/or validation links it entails. For instance, the corporate entrepreneur's idea is not automatically checked by his direct supervisor/manager but can rather be checked by experts, competent on the suggested idea or by a steering committee made up of members from different fields and hierarchical levels. This method prevents potential opportunistic behaviors from supervisors (bridging structural holes, Burt 1992), tempted to claim paternity for successful projects (that is to take advantage from their bridging position between creators and decision makers). In order to promote CE, managers must leave some freedom to corporate entrepreneurs: freedom to come into closer contact with other employees and/or suppliers (Hamel 2002; Seshadri and Tripathy 2006), freedom in the planning and implementation process (Taylor 2001). Formal organizational control provides stability to companies which need to benefit by competitive advantages simultaneously with enough flexibility to let employees develop a corporate entrepreneurial behavior. Cognitive social capital can act as a regulator of corporate entrepreneurial activity through the system of values shared between organization members. In that respect, Ouchi (1990) suggest that such “clan control” can be efficient in the management of uncertain social processes (like innovation) as it operates through internalized values and informal rules. The CE process should thus be based on rather broad, informal, control processes.

P4: Control plays a particular role in the last two stages of CE: in the validation of ideas / project design and the implementation of the project

P4a: At later stages, control processes should help bridge structural holes

P4b: At later stages, cognitive social capital can foster/substitute for informal control processes

Communication

Communication intervenes mainly at the CE implementation stage and to a lesser extent at opportunity recognition stage. Cognitive social capital influences communication as communication is based on a system of shared representations. This allows to transmit consistent messages about
the company's values, strategy and past results of CE (example of successful projects, symbolic or financial rewards for corporate entrepreneurs, qualitative or quantitative gains obtained). Communication brings a positive signal to employees on the beneficial effects of the CE for both the company and individuals and on the favorable symbolic and/or financial consequences they can obtain from it. According to Eesley and Longenecker (2006), corporate communication encourages employees to communicate more, to share information, coordinate activities, as well as to develop a culture of trust and support. Therefore, corporate communication helps develop exchanges between employees and, as a result, enhances relational social capital. Likewise, social networks and knowledge networks (Mohanty 1999) are a way to broadcast information and creative ideas (Granovetter 1982). Communication on CE can be done internally and/or externally to encourage clients, suppliers and other stakeholders to develop new ideas.

P5: Cognitive social capital enhances the effectiveness of communication at Opportunity Recognition and Implementation stages.

Resources

Resources play a role at all stages of the CE process. The structural dimension of networks and social capital, here the position of individuals in the network, strongly influences corporate entrepreneurs access to resources (knowledge and skills, economic capital, machines, systems, time and information that the organization makes available for innovation (Russell 1999)), the network acting, from this perspective, like a pipeline. The configuration of the network (structural dimension of social capital) impacts mainly the quantity of resources while trust (relational dimension) affects the quality of resources (Podolny and Baron 1997). Corporate entrepreneurs' centrality in networks (that is the number of direct connections with others) will strongly determine their potential access to resources. The quality of ties, trust existing between entrepreneurs and resource providers, will determine the latter's willingness to cooperate.

P6: Resources play a role at all stages of the CE process
P6a: Structural social capital will determine the quantity of resources accessible to corporate entrepreneurs

P6b: Relational social capital will determine the quality of resources accessible

P6c: Relational capital will determine the suppliers of resources' willingness to cooperate

Information system

The information system is essential for opportunity recognition (collaborative platform to exchange ideas) and, to a lesser extent, to CE project design (knowledge capitalization base). Relational social capital (trust) and cognitive social capital (shared vision, beliefs, narratives) encourage people to adopt and use the information system. Conversely, the implementation of IS may be considered as a means to bridge structural holes, creating link between individuals who up until then had not been in direct contact. The IS can therefore contribute to modify structural aspects of social capital. IS can help extend and strengthen ties between individuals by increasing interactions between them and conveying representations shared by cognitive social capital. It allows individuals to detect ideas, reproduce good practices, invigorate and steer the CE process. It thus has to be at the same time decentralized and integrated in order to match employees' needs while giving a global view of the process at organization level.

P7a: At Opportunity Recognition and Project Design stages, cognitive social capital can encourage people to use IS

P7b: At Opportunity Recognition and Project Design stages, the use of IS can help bridge structural holes

P7c: At Opportunity Recognition and Project Design stages, the use of IS can strengthen organizational cognitive social capital

The various interactions proposed are summarized in the following figure (Figure 4):

Figure 4: Interactions between social capital dimensions, CE levers and CE stages
Discussion and conclusion

This paper provides explanations for how dimensions of social capital – structural, relational and cognitive – mediate organizational levers for corporate entrepreneurship at different stages of the process. We integrated concepts from three distinct literatures. From (corporate) entrepreneurship theory, we identified three stages – opportunity recognition, project design and implementation. From organizational theory, we identified seven levers – Structure, HR, Culture, Control, Resources, Communication and I.S. From social capital theory, we identified three dimensions – structural, relational and cognitive. Based upon this literature review, we related levers to the stages of the CE process. We then related social capital dimensions to the CE process. Combining organizational and social elements, we suggest that structural, relational and cognitive social capital mediate the use and usefulness of levers at different stages of the CE process. For example, we observed and propose that structural social capital (that is network configuration and tie strength) fosters notably the use and performance of levers for opportunity recognition and design and implementation of projects (structure, resources). Relational social capital (trust and trustworthiness) mediates HR management throughout the CE process. We highlight the reciprocal influence of interpersonal trust (relational social capital) and policies designed to promote creativity (idea recognition) and innovation (design and implementation). Trust in colleagues and supervisors' encourages potential entrepreneurs to share and implement novel ideas provided such initiatives are clearly acknowledged and valued by the organization. Cognitive social capital (shared norms,
representations and narratives) mainly mediates culture and communication, two levers playing a critical role respectively at the Opportunity recognition and Implementation stages. Mutual understanding and shared interpretations contribute to build a culture of innovation, encouraging and demonstrating strong support for novel initiatives and set a virtuous circle in which ideas are constantly identified, translated into projects and implemented. These results/propositions contribute to existing theory in the area and holds implications for research and practice. Both structural and relational aspects of social capital considered suggest a focus on individual actors within the context of the organization's social arrangements (Floyd and Woolridge 1999) while the cognitive aspect puts an emphasis on groups, departments and the whole organization. We suggest that CE is a process that can be simultaneously considered from organizational and social perspectives. The interactions between organizational levels, organizational and social dimensions analyzed here partly explain the complexity of CE and that “throughout the process a measure of serendipity remains” (Floyd and Woolridge 1999: 138) as the process success depends on the alignment of various factors, some of which may not be controlled.

This research makes three contributions. From a theoretical perspective, it sheds light on how specific dimensions of corporate entrepreneurs' social capital interacts with organizational levers and provides a “corporate entrepreneurship dynamic” model. From an empirical perspective, as qualitative studies examining how social capital facilitates or restrict the activities of corporate entrepreneurs are scarce (Jones 2005), it contributes to answer the call for “systematic qualitative research” (Hitt and Ireland 2000). From a managerial perspective, this study may serve to refocus attention on individuals and their social capital as key determinants of the organizational levers executives use to stimulate entrepreneurial behavior and deploy corporate entrepreneurial initiatives. Future research may extend the present study and test the various propositions made, notably through alternative data collection methods.
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HUMAN CAPITAL OR SOCIAL CAPITAL –
A DETERMINANT OF ENTREPRENEURIAL CHOICE AMONG INDIAN IMMIGRANT ENTREPRENEURS IN AUSTRALIA.

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Key word: Human capital, social capital, propensity for entrepreneurship, immigrant entrepreneurs.

Abstract

The aim of this research is to conduct an in depth analysis of the role that variables like education, previous work experience, family business background, social and family relationships and ethnic networks, links to the country of origin play in determining an entrepreneurship career.

This study reviews the role and significance of Human Capital Vs Social capital as a determinant of entrepreneurial choice in a group of Indian immigrant entrepreneurs in Sydney in order to investigate and test the following hypotheses.

H1 There is a positive and significant relationship between the entrepreneurial choice and the social capital enjoyed by members of a common Indian ethnic group in Sydney.

H2 Choice to become an entrepreneur has been negatively correlated with human capital.

Data was collected from 52 Indian business firms, who owned, subways, post offices, KFC’s, Indian food stores, restaurants, car wash etc. This research highlights that the role of human capital as a determinant of entrepreneurship cannot be overlooked.
Achieving academic, market and political legitimacies: the “extreme case” of a French higher education institution entirely dedicated to entrepreneurship development

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Abstract
The aim of our paper is to study the long and complex legitimization process of Advancia, a business school of the Paris Chamber of Commerce entirely dedicated to entrepreneurship. In the context of higher education, the purpose of quality assurance management is to produce legitimacy (Rindova, Pollock and Hayward, 2006). What happens when an entrepreneurship business school works on simultaneously achieving academic, market and political legitimacies? Our research illustrates the tensions among these three specific legitimization processes and questions their impacts on the school’s quality assessment objectives and indicators.

Introduction
French entrepreneurship education is increasingly gaining ground for the last ten years, with more and more universities and many flourishing Bachelors and Masters offering courses and diplomas in entrepreneurship. At a macro level, these educational initiatives are well integrated into the national and the European policy frameworks aiming to stimulate entrepreneurial spirit and to increase the number of start-ups all over the continent (EFMD 2006). At a micro level, these programs are regularly facing a similar dilemma: achieving academic legitimacy according to quality assurance indicators, while at the same time reaching market and political recognition (Verstraete 2002). According to Binks and his colleagues (2006), scientific and technical higher educations have to demonstrate both academic and market legitimacies. In order to achieve academic legitimacy, higher education institutions focus on national and international accreditations systems (Van Damme 2001). In
order to achieve market legitimacy, higher education institutions focus on firms’ expectations concerning students’ skills acquisition and practice-oriented information (Starkey and Tiratsoo 2007). Entrepreneurship education has also to build political legitimacy, as French and European political actors expect entrepreneurship curricula to significantly contribute to economic growth and to the development of the “knowledge-based society” as ascribed by the Lisbon Agenda (2006).

How a French higher education institution entirely dedicated to entrepreneurship deals with quality assurance indicators in order to achieve academic, market and political legitimacies? A recent survey of EFMD (2008) identified sixteen major European business schools dedicated to entrepreneurship and examined their strategies in achieving academic legitimacy. Among them, Advancia may be analyzed as an “extreme case”, as this business school is the only French higher institution completely committed to entrepreneurship education. Empirical inquiries investigating “a contemporary phenomenon within its real-life context” (Yin 2003: 13), case studies may be particularly appropriate for analyzing the dynamics present within particular settings. According to Eisenhardt (2007), the choice of a single case study may be appropriate when one wants to explore new phenomenon, on a longitudinal basis. We used various sources of data - schools archives, programs curricula and syllabi, interviews with key actors, participant observation, in order to explore and explain the legitimization processes of Advancia over a period of six years, from 2004 to 2010.

Our research highlights the tensions that a higher education institution entirely dedicated to entrepreneurship encountered when building academic, market and political legitimacy and explore their potential impact on quality assessment. This extreme case may be informative for other business schools in the field of entrepreneurship, willing to reach

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1 Advancia developed a strong synergy between its Bachelor and Master in entrepreneurship, the school Incubator, its Research Centre in entrepreneurship, and the Club of Entrepreneurs’ of the Paris area. These programs function in close interaction in order to provide an innovative and effective educational environment for students interested in entrepreneurship.
The first section examines the quality assurance issue in higher education in relation with accountability and legitimacy concerns; the second section raises the issue of the quality management in entrepreneurship education and the importance of acquiring academic, market and political legitimacy; the third section shed some light on a number of convergent and divergent interactions among these three different legitimization processes and discuss their potential and actual impact on quality assurance. We will thus observe these tensions in terms of legitimacy-acquisition and their impact on pedagogical contents, methods, teams and overall pedagogical organisation and we will point up various "answers" that Advancia developed in an attempt to respond them adequately. We conclude our analysis with an emphasis on the way in which these tensions and the collective challenge to respond them effectively within quality standards produced an unexpected yet positive outcome: entrepreneurialism was strongly stimulated among the schools' curricula and teams.

**The Quality Assurance Issue in French Entrepreneurship Education**

**Accountability vs. legitimacy**

Several authors addressing the quality assurance issue in an educational context emphasize the importance of *accountability* (Grant & Aly, 2002; Blackmur, 2004; Mukherjee, 1995). Over the past eighteen years, quality control has become the key word of European government policies aiming to transform education into a market, with increased efficacy and efficiency. Therefore, higher education is increasingly "managed in accordance with the same criteria as any other economic undertaking" (Milliken and Colohan 2004: 382). The emergence of the quality assurance in the 1990s reflects a paradigm shift towards "performance indicators" (ibid.: 385), "conformance to requirements" (Crosby 1984), and
"total quality policies" envisioned as the cornerstone of the management in higher education (Mukherjee 1995: 573). This new emphasis on accountability encouraged both standards conformity and a search for excellence. However, besides these positive outcomes, the quality issue also produced several unintended negative consequences, with higher education organizations being "locked into a Weberian iron cage of overprescriptive rationality, given ends and operationalism" (Barnett 1994). This may be partially due to the fact that one tried to directly implement total quality principles and methods previously elaborated and successfully tested in industry to the higher education organizations, in order to enhance their academic and market legitimacy. Quality assessment thus became much more than an "ideological symbol" (Milliken and Colohan 2004: 389) legitimizing a "post-bureaucratic governmental control" (ibid.). It became one of the primary engines of legitimacy construction in the higher education market.

Legitimacy has been depicted as a generalized perception that the actions of an individual or those of an organization are desirable and appropriate within the current system of social norms and values (Suchman 1995). From the standpoint of a higher education organization, legitimacy is the combined outcome of various legitimization processes whereby the organization tries to increase congruence between its activities and socially defined standards, as well as market expectations (cf. Anderson and Smith 2007: 486-488).

Additionally, quality assurance turned out to be even more critical for those academic disciplines that were younger than the traditional well-established ones. Among them, entrepreneurship is a young player in the academic field, with just several decades of existence and a limited legitimacy in terms of educational specificity, quality assessment and public utility recognition. According to Katz (2008), Aldrich and Fiol (1994), entrepreneurship education carry out all-over the world a large amount of efforts in order to fully achieve three main kinds of legitimacies: cognitive, that is the level of acceptance of a
new curriculum, moral, that is the level of conformity of a new curriculum to the social norms and values, and regulatory, that is the level of conformity of a new curriculum to the rules and regulations of authority institutions. These three kinds of legitimacies were first identified in the industry and then applied as such to the educational market, a transfer whose relevance and rigour may be seen as problematic. First, because the genuine function of universities and business schools do not only consist in "selling" good "products" (students, diplomas) or "services" (learning experiences). Educational institutions play a major role in shaping students' minds and future behaviours, with students actively interacting with teachers and administration not only as "clients" but also as key actors of the educational system. Second, because universities and business schools are primarily knowledge-based organizations focusing on experiential and scientific added value in a different way when compared with new industries. The latter may indeed also rely on practices and representations common to the knowledge-based post-modern society, but they are primarily centred on producing financial added value. Third, the legitimacy issue of universities and business schools is not exclusively about quality assurance and assessment, as it is the case of most new industries, but also about academic knowledge management and social accountability.

Therefore, there may be risks in restraining the quality assurance issue in higher education to the sole measure of educational accountability, market and employers' positive feedback and students' satisfaction.

**Acquiring academic, market and political legitimacies**

In the context of higher education, the primary purpose of the quality assurance management is to produce legitimacy. Rindova, Pollock and Hayward (2006) emphasize that organizations build internal and external legitimacy with the intention of enhancing their influence on various stakeholders, attracting future clients and employees, and gaining
financial and public support. However, when it comes to higher education organizations, legitimacy is more than just about acquiring notoriety and reputation on a highly competitive national and international market (Van Damme 2001). Moreover, building legitimacy in higher education is about conveying a quality message relative to pedagogical contents and processes, pedagogical methods and teams, in an attempt to improve both the organization's market positioning and its ability to produce impact on society, culture and educational policies.

One may identify different types of legitimacies, according to the specific position an academic discipline occupies in the general academic field, as defined according to particular criteria, such as the discipline's centrality, maturity, expansion, etc. We introduce here an analytical distinction between the legitimacy-building process in scientific and technical higher education, in management education and in entrepreneurship education. According to Binks and his colleagues (2006), scientific and technical higher education needs to demonstrate a double legitimacy - academic and market legitimacies. Concerning the academic legitimacy, national and international accreditation institutions focus on the consistence of the pedagogical processes linking pedagogical contents and methods to the faculty composition and to the higher institution organizational design (Van Damme 2001). Concerning the market legitimacy, enterprises and clusters focus on the conformity of the business schools' pedagogical contents and skills development to the needs of the market and firms (Meuleau 1992; Nouschi 1881; Kipping and Nioche 1997; Starkey and Tiratsoo 2007). Conversely, management education has to demonstrate a similar double legitimacy. Academically, management education institutions made consistent efforts over several decades to show that their curricula respect just the same standards as the well-established prominent scientific, technical and social science disciplines. In order to illustrate its conformity with the market requirements, management education also needs to demonstrate
that students enrolled in management curricula are able to efficiently transfer management theories and models into managerial practices (Locke 1989; Stewart and Ross-Smith 2003; Starkey and Tiratsoo 2007). Moreover, the French management education has additional characteristics in terms of legitimacy acquisition. In the early XIXth century, major French economic actors - such as the executive committees of Chambers of Commerce - offered universities the opportunity of developing joint adapted curricula for future entrepreneurs and managers. French universities declined this offer, therefore determining Chambers of Commerce to open their own autonomous business schools, mainly professionally-oriented (Servan-Schreiber 1994; de Fournas 2007). Later, after achieving market legitimacy, French business schools gradually conquered academic legitimacy, whose foundation was the recognition by national accreditation institutions that assessed the quality of the business schools' diplomas. Recently, an additional legitimacy issue began to challenge the management of French business schools in the context of Chambers of Commerce, this is the political legitimacy. During the last decade, the executive committees of Chambers of Commerce made explicit demands that business schools' activities and curricula effectively respond to the economic priorities of the Chamber's region, as identified by the national and European political agendas. French business schools were nevertheless rather reluctant in building political legitimacy. To do so, they would need to measure the mid- and long-term impact of their curricula on the economic development of their region, which is a difficult quality assessment requirement, mainly because of methodological and practical complexity.

According to Lorange (2008), even though most universities and business schools all-over the world strive to acquire these two kinds of legitimacy - market and academic, they still have some work to do in order to increase their mutual coherence and convergence, because academic and market legitimacies may sometimes require different quality criteria to be meet, and different quality assessment procedures to be implemented. The overall
pedagogical quality of higher education organizations may therefore consist in the harmonization of academic and market legitimacy-building processes.

If scientific, technical and management education focus mainly on academic and market legitimacy, entrepreneurship education has also to build political legitimacy. Nowadays, entrepreneurship is given strong impetus both by national and European political actors, with entrepreneurship curricula facing thereby intense political pressures to demonstrate ability in producing short- and mid-term results, *i.e.* substantially increase the number of start ups, create new employment opportunities, and contribute to the young enterprises' growth and internationalization (Radu and Redien-Collot 2008). As one may notice, academic and market legitimacy rely mostly on process and content-based quality indicators, whereas political legitimacy is about the short- and mid-term outputs of the educational system, *i.e.* precisely those quality indicators most difficult to address by a higher education organization (Grant, Mergen, and Widrick 2002). More broadly, French and European political actors expect that entrepreneurship curricula not only significantly contribute to economic growth, but also to the development of the "knowledge-based society" as ascribed by the Lisbon Agenda (2006). Tensions and contradictions between academic, market and political legitimacies may thus became more apparent as entrepreneurship curricula strive to *simultaneously* acquire the three of them.

*Convergent vs. divergent legitimization processes and their potential impact on quality assurance*

**Advancia, an “Extreme Case” in the French Higher Education Landscape**

Entrepreneurship education strives to simultaneously achieve academic, market and political legitimacies. Sometimes, the three processes of legitimization through which these legitimacies are acquired happen to be convergent, while other times they may become rather
divergent and thus be at the origin of strong tensions within entrepreneurship curricula and higher education organizations. These tensions are often the result of the continuous improvement process that entrepreneurship curricula need to implement in order to effectively prepare students to detect business opportunities and to develop new ventures. In entrepreneurship education, pedagogical contents and methods are frequently questioned and reviewed so as to enhance their efficacy in terms of entrepreneurial skills acquisition. Furthermore, these tensions can also be the result of various organizational contradictions and paradoxes when attempting to articulate simultaneously three legitimization processes towards different targets, and through different quality criteria acquisition strategies.

Five years ago, Advancia, a business school of the Paris Chamber of Commerce, became a business schools entirely dedicated to entrepreneurship education, which is a unique positioning in the French higher education landscape. During the last five years, Advancia carried out a profound transformation of its Bachelor and Master programs, and launched new vocational learning programs for managers and entrepreneurs, a research centre in entrepreneurship, a club of entrepreneurs, a business angels network, and a school incubator where novice entrepreneurs start up sixty to eighty new ventures every year. This repositioning had manifold implications in terms of legitimacy acquisition. The school had to gain over very short laps of time a triple legitimacy: academic, market and political legitimacies. While trying to acquire each one of these legitimacies, Advancia put into practice several strategies aiming to demonstrate the quality of its processes and outcomes as a higher education institution. The business school entered last December the Conférence des Grandes Ecoles, one of the most prestigious quality labels in the French higher education market. Tensions may yet be observed between the three legitimating processes, and the quality criteria the business school uses to assess its legitimacy with reference to three different actors:
- the other French business schools and the Ministry of Education, when striving to achieve academic legitimacy;
- the French private and public sectors, when striving to achieve market legitimacy;
- the French government and the EU institutions, when striving to achieve political legitimacy.

At Advancia, the tensions among these three processes of legitimacy-acquisition had a powerful impact on the evolution of pedagogical contents and methods, pedagogical teams and on the overall pedagogical organization. Since then, constant efforts have been made to enter national and international accreditation systems, thus to comply with higher education quality standards as Kumaravadivelu (2001) identifies them:

- pedagogical contents, that is the relationship between academic disciplines, entrepreneurship curricula, and research (EQUIS emphasizes the central role of research activities in business schools, as well as the importance of transferring knowledge from research to the pedagogy);
- pedagogical methods, that is the relationship between traditional pedagogical methods and the new experiential learning paradigm, that is the relationship between reproductive and constructive learning;
- pedagogical teams, that is the relationship between academics and experts in entrepreneurship curricula, that is their specific role-distribution as facilitators and gatekeepers within a higher education context;
- higher education organizations, that is the relationship between the organization's management and its market strategy.

**Pedagogical Contents in Search of Academic and Market Legitimacies**
Many scholars stress that entrepreneurship education and research have not yet been stabilized. There is a clear tension in the articulation of the different aspects that characterize the entrepreneurial process and its social, cultural and political contexts. In spite of a small number of debates on this issue (Krueger 2000), sociological, philosophical and anthropological contributions are still marginal in the entrepreneurship literature, with a limited introduction of recent Deleuzian and Foucauldian theories. Actually, the dialogue of entrepreneurship with other disciplines seems quite chaotic and dominated by the key confrontation among, on the one hand, those scholars who claim for the field's autonomy and unity with regard to management studies, and, on the other hand, those scholars that defend the field's genuine interdisciplinarity. Consequently, there are two different visions of what an "appropriate" pedagogical content should be about in entrepreneurship: for those who defend the field's autonomy and specificity, entrepreneurship education should focus on preparing and assessing the students' "entrepreneurial performance" (Pretorius, Nieman, and Van. Vuuren 2005); for those who defend the field's interdisciplinarity, entrepreneurship education should focus on studying the interaction between entrepreneurial performance and its "social, cultural and political contexts" (Kyrö and Carrier 2005). These two different scientific and pedagogical approaches may potentially exert a direct effect on the students' entrepreneurial skills development, and as a consequence impact the entrepreneurship curricula’s market legitimacy.

Historically, entrepreneurship education and research are a several decades younger than management education. The emergence of new disciplines at the end of the XXth century brings out a number of deep epistemological challenges in the conception and elaboration of what was called a "discipline". According to the positivist tradition of XIXth century, a discipline had to demonstrate its autonomy in relation to other disciplines that it had stemmed out. Therefore, since the very beginning of the discipline, several entrepreneurship scholars
made important efforts to assess its autonomy, with direct reference to management (Grant and Perren 2002). In their attempt to develop entrepreneurship education as an autonomous field of practice and knowledge, these scholars conceived entrepreneurship curricula that programmatically integrated the four questions raised by Stevenson and Jarillo (1990) and Filion (1997):

- What happens when an entrepreneur acts? (a typical question for economy and political sciences)
- Why does an entrepreneur act? (a typical question for humanities and social sciences)
- Who is the entrepreneur? (a typical question for humanities and social sciences)
- How does the entrepreneur act? (a typical question for management theory and practice).

At the opposite, an alternative group of scholars in entrepreneurship education and research stressed the importance of respecting the diversity of approaches addressed in the realm of entrepreneurship. This interdisciplinary position echoes the vision of entrepreneurship as heterotopia, which is a discipline whose specificity is in being genuinely «in between spaces, where the possibilities of not being overthrown by habits and dominant modes (strategies in de Certeau’s sense) are kept alive» (Hjorth and Steyaert 2003: 294). In other words, according to this group of scholars, entrepreneurship as a heterogeneous discipline welcomes all kinds of knowledge produced elsewhere, i.e. in other fields, without intending to become a discipline in the traditional sense, and thus refusing to introduce any hierarchy between notions and theories borrowed to other disciplines, such as economy, management, humanities, or social sciences.

It is therefore not a surprise to notice than within this complex and sometimes contradictory discipline, it is difficult for entrepreneurship curricula to achieve academic legitimacy and, in some cases, to defend it. Frequently, academic positions in
entrepreneurship are cancelled and the development of entrepreneurship education is often circumscribed to the limits of entrepreneurship centres and business incubators that have regularly grown in number and size during the last ten years, whereas many entrepreneurship academic programmes were closed (Katz 2008). At the same time, the difficult construction of entrepreneurship academic legitimacy had an impact on the development of its market legitimacy. The tensions between the two theoretical schools of entrepreneurship produced various turbulences in entrepreneurship curricula and, by extension, in the process of entrepreneurial skills acquisition. The four above-mentioned questions - who, what, why, how? - of the tenets of autonomy (Scott, Rosa, and Klandt 1998; Fayolle 2000; Fiet 2001; Solomon, Duffy, and Tarabishy 2002) focus on the issue of entrepreneurial performance, and assign to entrepreneurship education a key role in rising entrepreneurial intentions, and developing entrepreneurial and business skills. At the opposite, Hjorth and Steyaert (2003), as well as Kyrö and Carrier (2005), Alberti (1999), Gartner and Vesper (1994) put a major emphasis on social, cultural and political contexts because they think contexts are intrinsically linked to entrepreneurial performance.

At Advancia, several curricula revisions have been undertaken since 2004. At the beginning of the school repositioning as an entrepreneurship institution, the vast majority of Bachelor and Master contents focus on entrepreneurial skills development, with little emphasis on entrepreneurial contexts, such as female and minority entrepreneurs, public entrepreneurship, social entrepreneurship, etc. The same was true for novice entrepreneurs entering the school's business incubator: they showed little concern about the more general social, cultural and political context of their entrepreneurial project, and they were for the most part exclusively interested in "performing well" (raising money, starting up their venture, hiring their first employees). It took three years to change this learning orientation and to implement pedagogy more sensitive to entrepreneurial contexts. Today, the learning
objectives of Advancia's undergraduate and graduate programmes are about fostering entrepreneurial performance, whereas, at the same time, addressing the issue of social, cultural and political French and European contexts as being of similar importance.

**Pedagogical Methods in Search of Political and Market Legitimacies**

Pretorius (2005), Binks (2006) and their colleagues indicate that entrepreneurship curricula started only recently to use new pedagogical methods in an attempt to reconcile entrepreneurial contents focusing on entrepreneurial performance and those focusing on entrepreneurial contexts. A pedagogy that recognizes the role of cultural, social and political contexts in shaping entrepreneurial performance put a great emphasis on the interaction between learner and teachers, analyzed as a dyad whose common goal is to question existing situations, problems, and solutions through critical thinking so as to finally elaborate new answers or solutions, contextually-driven (Caffarella and Burnett 1994; Mietenen 2000). Experiential learning is therefore increasingly employed in entrepreneurship programs, with the purpose of enabling students to launch truly innovative ventures. The main learning benefit of experiential methods is to enhance the students' ability to become actors of their own learning processes and, consequently, of their entrepreneurial behaviours (Kyrö 2005; Rae 2006). As a result, these pedagogical methods encourage students to act and think more autonomously and responsibly.

Experiential learning can motivate students to see how their entrepreneurial projects impact the surrounding social, cultural and economic contexts. However, the dialectics between the entrepreneurial project and its various contexts can be sometimes developed only for a very short-time, such as the course duration. And, hence, the learning outputs of experiential methods may possibly reveal disappointing in terms of skills acquisition. At Advancia, we noticed a perverse effect of using an experiential pedagogy in a venture creation
context. Indeed, students appreciated the learning experience of working on innovative projects simulation in the school incubator ("venturing machine"), but this learning experience had not enhanced entrepreneurial intentions, nor developed their effective entrepreneurial skills, since students preferred to enjoy the learning experience per se, without focusing on further personal business developments. In this case, there is a very small probability that students entering the incubation process end up with a venture creation. This kind of pedagogical process, if repeated, could be a risk for the school's perceived political legitimacy, i.e. the number of start ups launched by students after graduation. Additionally, experiential learning methods are a challenge for quality assessment in higher education, since the relationship between learning objectives and learning outcomes may be more difficult to evaluate because of the holistic approach of the pedagogical situation. Thus, using experiential methods in entrepreneurship curricula may well actually delay the organization's academic and market legitimization processes.

More broadly, concerning the use of experiential methods, Advancia was faced with a dilemma in terms of academic legitimacy: on the one hand, the school intended to test new pedagogical methods so as to achieve political legitimacy and demonstrate its ability to consistently increase the number of venture creation in young population; on the other hand, the school had to comply to national (Conférence des Grandes Ecoles) and international accreditation systems that ask for strong and consistent correlations between learning objectives and outcomes (efficacy), organizational resources and outcomes (efficiency), market needs and learning objectives (relevance). In order to fulfil political expectations of venture creation, during the first two years of functioning, the Advancia's incubator had to reallocate resources in order to progressively re-design a pathway that allows incubatees to radically transform their projects and their learning objectives throughout the six-months of the incubation process. Initially conceived as the final step before venture creation, the
Advancia's incubator became an entrepreneurship specific program aiming to allow potential entrepreneurs to foresee their venture creation and development as a life-long experiential learning process rather than as simply the acquisition of a desirable economic and social status that ends up a period of personal exploration and experimentation.

All over the world, Béchard and Toulouse (1991) noted a persistent dominance of case studies and lectures in entrepreneurship curricula, with traditional pedagogical approaches still dominant in use. The common teaching methods are business plans, lectures, case studies, reading programs, a situation that seems to prevail in France (Fayolle 2003) and in Europe (Wilson and Twaalfhoven 2005). Kyro and Carrier (2005: 25) called for an “action-based pedagogy” in an open learning environment, with more computerized and behavioural simulations, games, role-playing, films, experiential approaches, more original and unconventional teaching methods. Students enrolled in entrepreneurship curricula need to develop their ability to think critically and to revise existing stores of knowledge and abilities through knowledge production in “real life” situations (Binks, Starkey, and Mahon 2006, 15). However, this "pedagogy of transforming" may be difficult to evaluate through commonly shared management quality indicators, and thus the academic legitimacy of entrepreneurship curricula making extensive use of experiential methods may be ultimately endangered.

**Pedagogical Teams in Search of Efficacy**

Well-established entrepreneurship literature claims that entrepreneurial teams should respect three main requirements in order to produce effective learning outcomes in terms of entrepreneurial skills acquisition:

- entrepreneurship educators should be positive models to imitate (Léger-Jarnioux 1999; Leich and Harrison 1999; Formica 2002; Kuratko 2005);
entrepreneurship educators should be genuine facilitators to enhance students' entrepreneurial motivations and behavioural intentions (Fletcher 1999; Duchénaut 2001; Siok and Frank 2006);

entrepreneurship educators should be focused on students' skills development and on entrepreneurial specific contexts (Nonis and Hudson 1998; Kyrö and Carrier 2005).

Moreover, Pretorius and colleagues (2005) argue that entrepreneurship education challenged the functioning of traditional management programs’ pedagogical teams, who classically distinguished between academics and business experts. Entrepreneurship pedagogical teams introduce a new role, that of the facilitator standing at the core of the entrepreneurial educational system. Ideally, a good facilitator should increase the students' motivation and entrepreneurial intentions, as well as develop students' entrepreneurial and business skills according to market, social and cultural requirements. In reality, the facilitator's role is often achieved not by a sole isolated individual but rather by an entire group of academics, experts and coaches, as in the Advancia's incubator, for instance. More interestingly, over the last five years, we noticed a progressive and profound hybridization of the original profiles, with professors becoming entrepreneurs, experts becoming professors, and the head of the entrepreneurs' network preparing a thesis in entrepreneurship. Other additional economic and political actors joined the entrepreneurship pedagogical team of Advancia: business angels evaluating students' performance in business planning, European lobbyists evaluating the students' ability to elaborate and defend position papers on entrepreneurial issues, etc.

Still, the reality is more complex and flexible than classical management education distinctions kept alive in entrepreneurship literature: teachers are supposed to be more concerned with theory and mentors with practice; very little is said about teachers who become entrepreneurs, then mentors, or about teachers who become mentors or facilitators.
without being first entrepreneurs, nor having prior experience in business venturing. Although the role and the quality of pedagogical contents and methods are systematically discussed in the field of entrepreneurship education, entrepreneurial pedagogical teams are repeatedly described as "inputs" in the entrepreneurial teaching machine and rarely pictured as living actors, with potentially multiple and heterogeneous professional choices and experiences. To some extent, this may be an unintended outcome of international accreditation requirements. One key quality indicator in higher education concerns the faculty qualifications that have to be documented with information relative to the professors' diplomas and publications. From an academic standpoint, it is obvious that the legitimacy of this kind of heterogeneous entrepreneurial pedagogical teams may sound dubious: their various expertises and their status flexibility could be beneficial for the students' skill acquisition, but they may also puzzle the quality standards of accreditation institutions.

Moreover, the members of the Advancia's pedagogical team changed their roles and status several times since the schools' repositioning: at the very beginning, ten professors in entrepreneurship launched the Master program and the Research centre in entrepreneurship. Over the years, two of them became coaches in the school incubator, one of them became entrepreneur, one of them became consultant in corporate entrepreneurship, two of them became pedagogical managers, and one of them became business angel. This exceptional professional flexibility may have had both positive and negative consequences in terms of pedagogical efficacy and quality assessment. In any case, for national and international accreditation systems, these educators and their role-elasticity can be perceived as a potential risk for the schools' academic and market legitimacies.

Additionally, soon after the schools' repositioning, the pedagogical team integrated new actors, mainly political ones, such as various members of the Paris Chamber of Commerce delegations, administrative representatives of the French Chambers of Commerce
in Brussels, local representatives of the city hall, a number of coordinators of social and business networks, etc. According to the national and international accreditation criteria, these newcomers may be hardly categorized as "participating" or just "supporting" contributors. Nevertheless, in an entrepreneurial context, their contribution appears as crucial for achieving academic, market and political legitimacies. To conclude on this topic, Advancia took the risk of diminishing its academic legitimacy when it decided to integrate regional, national and European actors in its pedagogical teams. Moreover, the school developed new innovative programs for some of these political actors: for instance, in partnership with a Parisian university, Advancia launched the first French vocational learning program for entrepreneurship sensitization agents, \textit{i.e.} the current and potential business start up counsellors of the Paris Chamber of Commerce; at the same time, the school got involved in an European network aiming to train European entrepreneurship sensitization agents. One year ago, an additional program for political actors was launched, in partnership with ENEA, this is a training program for coaches and business angels.

In the context of entrepreneurship education, Advancia is facing a supplementary confrontation, this time with the market itself. Indeed, Bachelor and Master students enrolled in entrepreneurship curricula often intend to start up their own business after graduation. But in the meantime, they also have to find part-time jobs or internship offers in French large corporations, rather reluctant to their potentially disruptive profiles, as the number of large corporations willing to develop corporate entrepreneurship is still limited.

\textbf{A pedagogical open environment linking business schools to business incubators}

The organization and functioning of higher education programs specialized in management traditionally juxtaposed business schools and enterprises as the two faces of a binary system. Entrepreneurship curricula challenged this model and progressively replaced it
with an educational paradigm whose intention is to systematically articulate business schools with enterprises and business incubators into an "open learning environment". Kyrö and Carrier (2005: 29) noticed that, in many cases, new university structures are needed for entrepreneurship education. These structures allow students to circulate within an entrepreneurial environment conceptualized as an "open environment" (ibid.). Ideally, entrepreneurship scholars imagine this "open environment" as a pedagogical setting where there would be no boundaries between the classroom and the surrounding reality, or between academic disciplines and economic actors. Learning in such an open environment could therefore consist in “increasing and supporting competences for enjoying and acting in complexity and insecurity and recognizing as well as creating opportunities involved in it” (ibid.: 28).

Business schools entirely dedicated to entrepreneurship are therefore not only in a partnership relation with various enterprises; these schools effectively and directly contribute to business creation and development. Consequently, they need to continuously optimize their incubating approaches and design specific pathways between their academic curricula and school incubators. For instance, at Advancia, Bachelor and Master students have the opportunity to do their internship in the school incubator, and can therefore launch their own venture while still at school. However, in terms of academic legitimacy, business schools are facing a strong dilemma when they are asked to explain the role of their incubator in the educational organization, or when they need to prove the efficacy of articulating classroom approaches with incubating processes in terms of entrepreneurial skills acquisition. National and international accreditation institutions do not take into account the incubators' pedagogical contribution because they do not deliver degrees, even though they can deliver credits. This is yet a paradoxical situation, since the pedagogical model of Advancia is built around the school's incubator. Many international universities and French business schools,
rather than developing their own incubator, preferred therefore to work in partnership with already existing private and public incubators and nurseries. However, Advancia is not an unique, neither an isolated case, as the European Commission noticed the growing emergence of new independent centres specialized in entrepreneurial education, as well as the launching of new networks and business schools with integrated business incubators (European Commission 2002; Wilson and Twaalfhoven 2003).

**Conclusion**

The Advancia's case may be analyzed as an illustration of the various tensions a higher institution dedicated to entrepreneurship may face when simultaneously trying to achieve academic, market and political legitimacy. In this context, acquiring academic legitimacy is about challenging the field of management and its capacity to welcome a new discipline, that is new pedagogical contents, methods, faculty, and organization, and to elaborate new quality objectives and indicators. The business schools' efforts in acquiring academic legitimacy are not exclusive, as Advancia is involved in two additional complementary legitimizing processes so as to achieve market and political legitimacies. Tensions are expected since the three legitimizing processes have distinct targets - the accreditation institutions, when it comes to academic legitimacy, the public and private organizations and firms, when it comes to market legitimacy, the French government and the EU institutions, when it comes to political legitimacy. Several authors had already emphasized the importance of acquiring market and political legitimacies for higher education curricula (Stewart and Ross-Smith 2003; Starkey and Tiratsoo 2007; Lorange 2008). However, little is known about the way in which entrepreneurship education may re-articulate these three types of legitimacies that management education frequently presents as uniquely stemming out of the market of higher education. For instance, the analysis of the Advancia's case indicates that the school does not
always comply with market requirements when it acts in accordance with political requirements. Conversely, it also indicates that academic and political legitimacies may clash when trying to use the same quality assessment criteria.

In order to equally and simultaneously respond to these three legitimizing processes, entrepreneurship education may need to re-examine several major educational categories, such as the notions of pedagogical contents, pedagogical methods, pedagogical teams, and educational environment and organization. Additional research is crucial so as to address the following questions: what pedagogical theory and/or method for reconciling pedagogical approaches focusing on entrepreneurial performance and those focusing on entrepreneurial contexts? What potential evolution of entrepreneurship education in relation with management? What quality assessment for entrepreneurship education in a context of profound deconstruction of traditional pedagogical representations and practices?

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Bibliography


Corporate Transparency and Firm Performance: Evidence from Korean Ventures

by Younghwan Kim, Jungwoo Lee, and Taeyong Yang

Corporate transparency has attracted the interest of many researchers and entrepreneurs during the past decade. In this paper, we propose a new corporate transparency index which consists of four sub-indices: financial, governance, operational, and social transparency. Using our transparency index, we assess the corporate transparency of 237 Korean ventures. In addition, we examine the effect of venture firms’ transparency on firm performance. The results show that corporate transparency can enhance firm profitability and sustainability. In particular, financial transparency plays an important role in firm profitability. Social transparency can also increase a firm’s profits, and operational transparency heightens firm sustainability.

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**Introduction**

Corporate transparency has been massively highlighted by academics, policymakers and entrepreneurs since the East Asian financial crisis of 1997. Highly developed countries, such as the United States, Japan and Western European countries, have also newly recognized the importance of corporate transparency after several accounting scandals involving world-famous enterprises.

These interests in corporate transparency have stimulated many researchers to study its characteristics and effects on corporate business and management performance. However, various methods for measuring corporate transparency exist and are not unified in the existing literature due to the abstract nature and invisibility of corporate transparency. Many researchers have considered corporate transparency to mean how timely and how properly a firm transfers its intrinsic information to profoundly related outsiders such as investors or stockholders. Therefore, to measure corporate transparency, they have assessed the sincerity of the disclosure activity of the corporation, which is aimed at dissolution of information asymmetry at the firm level (Bushman, Piotroski, and Smith 2004). In terms of the contents of corporate transparency, many studies have treated financial transparency and governance transparency as two main components of corporate transparency (Patel, Balic, and Bwakira 2002; Aksu and Kosedag 2006; Cheung et al. 2008). In addition, previous studies have limited the object of corporate transparency to stockholders and investors. From the literature review, we can find that previous studies have focused corporate transparency on relations within an enterprise or between a firm and its stockholders and have highlighted financial transparency and governance transparency, while ignoring the general public and regional communities as objects for corporate transparency and overlooking other aspects of corporate transparency in terms of contents.

On the other hand, many studies have shown evidence that corporate transparency leads positively firm performance at the individual firm level. Many researchers have revealed that corporate
transparency and its sub-indices positively and significantly affect various performance factors such as Tobin’s q, price-to-book ratio (PBR), and return on assets (ROA). However, they merely selected single or multiple factors of firm performance, without distinguishing the characteristic of performance, such as firm value, firm profitability, and firm sustainability, on the structural and holistic concept.

Therefore, in this paper, we expand the definition of corporate transparency to include the accurate delivery of corporate information for various stakeholders, such as customers, and potential investors, as well as regional society and community, and transparent operation of decision processes within a firm. Based on the Transparency and Disclosure Index (T&D index) compiled by Standard & Poor’s (S&P), the most popular index of corporate transparency, we suggest a new corporate transparency index, adding some evaluation items from previous indices such as the Corporate Governance Ratings by Credit Lyonnais Securities Asia B.V. (CLSA index), the Korean Corporate Governance Index (KCGI), the Matrix of Ethical Management by the Federation of Korean Industries (FKI), and the indices proposed by Kang et al. (2007) and Cheung et al. (2008), and classify them into four sub-indices: financial transparency, governance transparency, operational transparency, and social transparency.

In addition, we assess the corporate transparency of individual Korean venture firms by our corporate transparency index, and examine the effect of corporate transparency on firm performance. We estimate the effect of four sub-indices of corporate transparency and sub-components of the sub-indices as well as that of the overall corporate transparency index on firm performance. In addition, we classify firm performance into firm value, firm profitability, and firm sustainability in order to examine the effect of sub-indices and sub-components of corporate transparency on various aspects of firm performance. For our analysis, we selected 237 Korean firms listed on the ‘Korean Securities Dealers Automated Quotations (KOSDAQ) Venture Index’ of the Korea Exchange (KRX) at the end of the year 2008. In addition, we investigated and evaluated the corporate transparency of 48 large companies listed on the ‘Korea Composite Stock Price Index 50 (KOSPI 50)’ as a comparison group.
Consequently, by emphasizing the importance of corporate transparency on firm performance and revealing the relationship between performance factors, such as firm value, firm profitability, and firm sustainability, and the sub-indices and sub-components of corporate transparency, our study seeks to cultivate the interest of entrepreneurs and policymakers in enhancing corporate transparency. It also seeks to encourage them to establish plans to promote corporate transparency for venture performance.

**Measuring Corporate Transparency and Firm Performance**

Though various studies have examined corporate transparency, the definition and measures of corporate transparency have differed according to the study. Corporate transparency means how timely and how properly a firm transfers its intrinsic information to related outsiders such as investors or stockholders. In other words, corporate transparency denotes the level of activity for dissolution of information asymmetry at the firm level (Bushman, Piotroski, and Smith 2004). Therefore, corporate transparency has been equivalent to the disclosure of firm-related information in much of the literature that has studied corporate transparency. According to these papers, corporate transparency can be measured as completeness, timeliness, consistency and accessibility in the disclosure activity of the firm (IMF 1998; Han and Bae 2001). However, disclosure is a procedure aimed at realizing invisible corporate transparency rather than a true measure of its nature. Accordingly, it is problematic that traditional measures of corporate transparency have focused on the level of information disclosure.

In order to study corporate transparency in a substantive manner, not viewing it as simply the level of disclosure activity, previous research works have focused on financial transparency and governance transparency (Bushman, Piotroski, and Smith 2004). Most studies that referred to corporate transparency have regarded it as financial transparency (Han and Bae 2001), governance transparency (Black, Jang, and Kim 2006), or the combination of these two transparencies (Patel, Balic, and Bwakira 2002).

Many studies that have treated financial transparency and governance transparency as two main
components of corporate transparency have a common feature that the object of corporate transparency which is realized by disclosure activity is limited to stockholders and investors. However, the object of disclosure can be expanded to include various stakeholders related to the firm such as customers and potential investors, as well as regional society and communities. With this broader definition of corporate transparency, some researchers have sought to examine a number of provocative issues related to corporate transparency. Bushman, Piotroski, and Smith (2004) defined corporate transparency as the level of widespread utilization of corporate-related specific information that is disclosed to the public outside the firm in the economy, distinguishing this information mechanism into three divisions: corporate reporting, private information acquisition and communication, and information dissemination. Furthermore, Dubbink, Graafland, and van Liedekerke (2008) maintained that corporate transparency is a necessary condition of corporate social responsibility (CSR) and emphasizing the role of CSR as an open type of corporate governance.

Among the measures of corporate transparency in the previous research works, the T&D index of S&P has been broadly known. The T&D index consists of 98 questions for the evaluation of corporate transparency in three major sections: ownership structure and investor rights, board structure and process, and financial transparency and information disclosure. Each question is a binary type which has only two answers: yes or no. The level of corporate transparency can be measured using a total score of 98 questions where one point can be given to a yes for each question at the firm level. For evaluation, the researchers of the T&D index basically investigate a corporate annual report of the firm. In the case of U.S. firms, they also consider other important disclosed documents such as 10-Ks or proxy statements which should be submitted to the U.S. Securities and Exchange Commission (SEC). They score the companies of the S&P Global 1200 Index and the 300 companies of the S&P/IFCI Emerging Market Index (Patel and Dallas 2002; Patel, Balic, and Bwakira 2002). Patel, Balic, and Bwakira (2002) compared the corporate transparency scores of the companies in Asian, Latin American,
Eastern European and Middle Eastern emerging markets using S&P’s T&D index. As a result, Asian emerging markets have higher corporate transparency scores compared to other emerging markets. Among Asian emerging markets, Korea is the fastest-growing country in terms of the level of corporate transparency.

The CLSA index is also well known as an index of corporate transparency (Durnev and Kim 2005). This index includes 57 questions in seven major parts: discipline, transparency, independence, accountability, responsibility, fairness, and social awareness. All questions are also binary types. The index requires an interview, because some questions require subjective answers. Therefore, it is difficult for the CLSA index to be objective because of the characteristics of the questions it uses. In particular, it contains questions on social awareness as well as questions about financial transparency and governance transparency, allowing corporate transparency to be synthetically evaluated.

In Korea, one of the fastest-growing countries in terms of corporate transparency, the Corporate Governance Service (CGS) assesses the corporate governance of listed companies on the Korea Exchange (KRX) by questionnaire and survey, and annually announces its KCGI. All assessment items of the KCGI are included in five major parts: protection of stockholder interest, board of directors, disclosure, auditing body, and distribution of the proceeds of operation. Based on the results of the corporate governance assessment, CGS publishes a governance assessment grade which is evaluated using a scale of eight grades from "Excellent" to "Very Weak". Most of the leading companies in Korea expose this grade to the public through their corporate website.

Using these several developed indices of corporate transparency, many researchers have investigated the relationship between corporate transparency and firm performance at the firm level. Because the most popular corporate transparency index is S&P’s T&D index, the majority of corporate transparency researchers have used the intact T&D index as an instrument to evaluate corporate transparency (Patel, Balic, and Bwakira 2002; Khanna, Palepu, and Srinivasan 2004; Durnev and Kim 2005; Chen et al. 2007). Meanwhile, another group of researchers has simply added and adjusted some
items in the context of the specific country, keeping the T&D index as a base (Aksu and Kosedag 2006). The others have made a new corporate transparency index in a specific national context adapting the T&D index by changing a large part of the questions (Park et al. 2006; Kang et al. 2007). Patel, Balic, and Bwakira (2002) found a positive relationship between a firm’s T&D score and its PBR. Park et al. (2006) discovered that their developed transparency index has a positive and significant effect on the firm’s Tobin’s q. Particularly noteworthy is their finding that transparency of ownership structure, transparency of the board of directors, and transparency of accounting among the sub-indices are positively and significantly associated with firm value, while return on investment (ROI), return on management (ROM) and ROA are not related with corporate transparency. On the other hand, Durnev and Kim (2005) used both the T&D index and the CLSA index in order to estimate the effect of corporate transparency on Tobin’s q as a measure of corporate value, concluding that corporate transparency positively affects corporate value. However, they mentioned that the insignificant relationship between corporate value and the social awareness part of the CLSA index can be controversial.

On the other hand, the scope of corporate transparency has been limited to governance transparency by many researchers. Black, Jang, and Kim (2006) discovered that there is a positive and significant relationship between the KCGI index and the Tobin’s q of a firm in Korea. In another study on the effect of a Korean chaebol’s governance on its value and performance by Choi, Kang, and Lee (2008), corporate governance composite index, board structure sub-index, board procedure sub-index, and transparency sub-index among five indicators of corporate governance are positively correlated with market-to-book value (MBR) which represents individual firm value. In addition, they found that management performance, measured by return on equity (ROE), has a positive relationship with the corporate governance composite index, shareholder rights sub-index, board procedure sub-index, and transparency sub-index. However, in the case of China, one of the fastest-emerging markets, there is no relation between corporate governance and firm value. This result shows that a high level of individual
corporate transparency is not well reflected on a firm’s market value in China (Cheung et al. 2008).

The previous research works that we introduced have focused on how a corporate transparency index should be made for objective and precise evaluation and whether corporate transparency leads to the firm value and performance. However, such works have defined corporate transparency narrowly as affecting only shareholders and investors, and have focused financial and governance disclosure excluding other aspects of corporate transparency. Therefore, in this paper, we expand the scope that corporate transparency affects from the investor or the shareholder to other stakeholders and regional society. We propose a new corporate transparency index that adds the part of operational transparency (Park et al. 2006; Kang et al. 2007) and social transparency to a pre-existing part of financial transparency and governance transparency. In addition, we compare the corporate transparency scores of venture firms listed on the KOSDAQ with those of large companies listed on the KOSPI 50 in Korea. Finally, we conduct an empirical analysis in order to examine the relationship between corporate transparency and firm performance such as firm value, firm profitability, and firm sustainability in Korean ventures. As a consequence, we suggest some policy implications to enhance corporate transparency of Korean ventures for their performance.

**Suggestion of Corporate Transparency Index**

**Composition of Corporate Transparency Index**

We devise a new corporate transparency index after investigating the items of transparency indices from various previous studies, screening out appropriate items, and adding some new items for our classification of corporate transparency. To compose this index, we divide corporate transparency into four subsections: financial transparency, governance transparency, operational transparency, and social transparency. Based on S&P's T&D index, the most popular index of corporate transparency, we
supplement it with some evaluation items from various previous indices.¹ We combine *ownership structure and investor rights* and board structure and process of the T&D index into *governance transparency*, and the items under financial transparency and information disclosure are re-sorted into financial transparency and operational transparency. In addition, *social transparency*, which is not in the T&D index, is newly defined according to related previous research works (Kang et al. 2007; Cheung et al. 2008). In addition, new items not mentioned in previous studies are invented and added to the index. Appendix 1 lists the questions from the corporate transparency index.²

**Scoring Corporate Transparency**

We evaluate individual corporate transparency by using corporate annual reports as a basis for our analysis. The T&D index of S&P used only annual reports, 10-Ks or proxy statements as sources for evaluation, while our study covers annual reports and various sources.³ All kinds of reports have the one year of 2007 as their time period.⁴ On the other hand, information on a corporate website is available through the web-site at the end of the year 2008.⁵ All kinds of information sources should be available online and acceptable to everyone in order to fairly evaluate the sincerity and credibility of a firm’s disclosure activity for investors, stakeholders and the public.

We give a score of *zero or one* for each item on the transparency index: a *yes* answer gains *one* point, while a *no* answer means *zero* points, the type of binary-type question. If we cannot answer *yes*

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¹ Various previous indices are such as the CLSA index, the Korean CGS index (KCGI), the Matrix of Ethical Management by the Federation of Korean Industries (FKI), and the index of Kang et al. (2007) and Cheung et al. (2008), and classify them into these four subsections (sub-indices)

² The overall index contains 149 questions: 36 on financial transparency, 76 on governance transparency, 17 on operational transparency, 19 on social transparency, and single independent question which does not belong to any subsection.

³ Various sources that we investigate are such as audit reports, consolidated audit reports (if they exist), sales reports, articles of incorporation, information on the corporate website, information of Investor Relations (IR) activities, corporate sustainability reports or social responsibility reports, corporate environment reports, e-brochures, corporate governance charter, code of conduct or guideline for business ethics, and official disclosed documents through the Korean DART (Data Analysis, Retrieval and Transfer) system which is an official web-based disclosing system for all public companies on Korean stock markets.

⁴ Some items on the evaluation index can cover besides the year 2007.

⁵ The items that do not follow these two rules about the period of our study are marked at the index of Appendix 1.
or no, in other words, if a specific question is not related with a specific firm, we do not give a score. However, because we cannot fairly compare the levels of individual corporate transparency unless we can answer yes or no to all questions, we devise a transformational score.\(^6\)

In addition, the scores of our four sub-indices - financial transparency, governance transparency, operational transparency, and social transparency are transformed by the same way. Finally, we use these transformed scores of corporate transparency for our analysis: Sub-index F, Sub-index G, Sub-index O, Sub-index S, and Overall index (total score). T&D scores of S&P (T&D Index) are also calculated for a robustness check of our empirical model (Patel, Balic, and Bwakira 2002).

**Samples and Variables**

In order to examine the relationship between individual corporate transparency and firm performance, we selected 237 Korean firms listed on the ‘KOSDAQ Venture Index’ of the KRX at the end of the year 2008.\(^7\) Venture firms on the KOSDAQ Venture Index are those businesses that satisfy the requirements established in Article 2, Item 2, and Clause 1 of the ‘Special Law for the Promotion of Venture Business.’ This public verification system of the venture firm is unique to Korea. Venture businesses are divided into venture capital investment firms, research & development firms, technical evaluation certification firms, technical evaluation loaning firms, and preliminary venture firms. The Venture Index is published based on constituents composed of venture business. We selected the firms on the KOSDAQ Venture Index for our analysis because corporate annual reports and disclosed information of the firms listed on a public stock market are easy to access. On the other hand, we investigate and evaluate the corporate transparency of 48 large companies listed on the ‘KOSPI 50’ as a comparison group, so that we can try to

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\(^6\) Accordingly, if we can answer yes to all 149 items for a firm, the firm can have a score of 149. However, if a firm has 29 items unanswerable among total 149 items and 60 questions have a yes answer, we can calculate the total transformed score by the formula: \(60/(149-29)*100=50\) (full mark of 100).

\(^7\) Among 268 firms included on the “KOSDAQ Venture Index” at the end of year 2008, 27 firms that were newly listed on KOSDAQ in 2008, three firms that were delisted and one firm that changed its name were excluded from our analysis due to a lack of information.
distinguish the differences in corporate transparency between these two groups.\(^8\)

In this study, we conduct an empirical analysis through multivariate regression methods in order to examine the relationship between corporate transparency and firm performance. Performance-related factors are dependent variables, and individual corporate transparency scores are explanatory variables. We conceptually divide firm performance into firm value, firm profitability and firm sustainability. First, we select \textit{price-to-book ratio} (PBR) as a measure of firm value. Firm profitability can be explained by \textit{return on assets} (ROA) and \textit{operating profit rate} (OPR). While we can find some papers examining the effect of corporate transparency on firm value, empirical explorations for the relationship between corporate transparency and firm profitability are hard to find. \textit{Age of the firm} (Age) represents firm sustainability.\(^9\) In the previous literature, no study has examined the effect of corporate transparency on firm sustainability or firm survival. These firm performance related factors can be obtained from the FnGuide\textsuperscript{TM} Database, one of the largest content providers for the Korean stock market, in the year 2007, and the descriptions are shown in Table 1.

To control the effect of corporate transparency scores on firm performance, we selected several control variables: \textit{assets},\(^{10}\) \textit{equity/assets},\(^{11}\) \textit{liability/equity},\(^{12}\) \textit{R&D expenditures/sales},\(^{13}\) \textit{cash/assets},\(^{14}\) \textit{foreign ownership},\(^{15}\) \textit{sole ownership},\(^{16}\) \textit{duration of being listed on stock market (Listed)}\(^{17}\) and \textit{industry dummies}.\(^{18}\) The detailed descriptions of control variables as well as transparency indices are also represented in Table 1.

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\(^8\) Among 50 firms included in the ‘KOSPI 50’, one firm is excluded from our analysis due to the stock exchange and transfer in 2008, and one firm is excluded from our analysis due to being acquired.
\(^9\) The unit of ‘Age’ is a month.
\(^{10}\) Black, Jang, and Kim 2006; Park et al. 2006; Cheung et al. 2008; Doidge, Karolyi, and Stulz 2007; Kang et al. 2007
\(^{11}\) Aksu and Kosedag 2006; Park et al. 2006; Marshall and Weetman 2007; Cheung et al. 2008; Choi, Kang, and Lee 2008; Kowalewski, Stetsyuk, and Talavera 2008
\(^{12}\) Black, Jang, and Kim 2006; Cheung et al. 2008; Choi, Kang, and Lee 2008
\(^{13}\) Khanna, Palepu, and Srinivasan 2004; Durnev and Kim 2005; Black, Jang, and Kim 2006; Park et al. 2006
\(^{14}\) Berglof and Pajuste 2005; Doidge, Karolyi, and Stulz 2007
\(^{15}\) Black, Jang, and Kim 2006; Kang et al. 2007; Cheung et al. 2008
\(^{16}\) Han and Bae 2001; Bushman, Piotroski, and Smith 2004; Berglof and Pajuste 2005; Black, Jang, and Kim 2006; Doidge, Karolyi, and Stulz 2007; Kang et al. 2007; Marshall and Weetman 2007; Cheung et al. 2008
\(^{17}\) The unit of ‘Listed’ is a month. Khanna, Palepu, and Srinivasan 2004; Black, Jang, and Kim 2006; Cheung et al. 2008
\(^{18}\) Khanna, Palepu, and Srinivasan 2004
### Table 1
**Variables Description**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Index</td>
<td>Overall Corporate Transparency Index</td>
</tr>
<tr>
<td>Sub-index F</td>
<td>Financial Transparency Sub-index</td>
</tr>
<tr>
<td>Sub-index G</td>
<td>Governance Transparency Sub-index</td>
</tr>
<tr>
<td>Sub-index O</td>
<td>Operational Transparency Sub-index</td>
</tr>
<tr>
<td>Sub-index S</td>
<td>Social Transparency Sub-index</td>
</tr>
<tr>
<td>T&amp;D Index</td>
<td>Standards &amp; Poor’s Transparency &amp; Disclosure Index</td>
</tr>
<tr>
<td>PBR</td>
<td>Price to Book value Ratio, Stock price / Book value, 2007</td>
</tr>
<tr>
<td>ROA</td>
<td>Return On Assets, Net income / Total assets, 2007</td>
</tr>
<tr>
<td>Operating Profit Rate</td>
<td>Operating profit / Total sales (percent), 2007</td>
</tr>
<tr>
<td>Age (Months, Ln)</td>
<td>Natural logarithm of month ages of a firm from birth month to the end of 2008</td>
</tr>
<tr>
<td>Assets (Ln)</td>
<td>Natural logarithm of total assets of the firm, 2007</td>
</tr>
<tr>
<td>Equity/Assets</td>
<td>Total equity / Total assets of the firm, 2007</td>
</tr>
<tr>
<td>Liability/Equity</td>
<td>Total liability / Total equity of the firm, 2007</td>
</tr>
<tr>
<td>R&amp;D/Sales</td>
<td>Research &amp; Development expenditure / Sales of the firm, 2007</td>
</tr>
<tr>
<td>Cash/Assets</td>
<td>Total cash / Total assets of the firm, 2007</td>
</tr>
<tr>
<td>Foreign Ownership</td>
<td>Percentage of foreign shareholders (at the end of 2007)</td>
</tr>
<tr>
<td>Sole Ownership</td>
<td>Percentage share ownership by the largest shareholders (at the end of 2007)</td>
</tr>
<tr>
<td>Months Listed (Ln)</td>
<td>Natural logarithm of listed months of a firm from IPO month to the end of 2008</td>
</tr>
<tr>
<td>Industry Dummies</td>
<td>Dummy variables for industries (based on FICS Sector)</td>
</tr>
</tbody>
</table>

* FICS: FnGuide Industry Classification Standard. FICS has a three-level hierarchical classification system: 1) FICS sector, 2) FICS industry group, and 3) FICS industry. We distinguish industries where venture firms are at the sector level. In the case of the total group of 237 venture firms, they consist of 149 information technology (IT) firms, 28 health care firms, 25 consumer discretionary firms, 24 industrial products firms, six material firms, three energy firms, and two consumer staples firms. Because the data of large companies is not used in the regression between corporate transparency and firm performance, we do not classify them by industry.

**NOTE:** The fiscal year of most firms is from January 1st to December 31st. In that case, we use the data of control variables at the end of 2007. However, some firms have different fiscal years. In the case of firms that have April 1st, July 1st, and October 1st as the beginning day of their fiscal year, we use financial data on March 31st in 2008, June 30th in 2007, and September 30th in 2007, respectively.

### Empirical Results

**Comparison of Corporate Transparency between Large Companies and Venture Firms**

Before examining the relationship between corporate transparency and firm performance in Korean ventures, we explore the level of corporate transparency of 237 Korean ventures through a comparison with 48 Korean large companies. Table 2 shows the descriptive statistics of our samples. The total corporate transparency score of large firms and ventures is significantly different. As the case of the overall index which we suggested, the average T&D scores of large companies and ventures differ significantly.
### Table 2
Descriptive Statistics of Large Companies and Venture Firms

<table>
<thead>
<tr>
<th>Variables</th>
<th>Overall (n=285)</th>
<th>Large Firms (n=48)</th>
<th>Ventures* (n=237)</th>
<th>F-stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Index</td>
<td>53.935</td>
<td>68.586</td>
<td>50.968</td>
<td>417.754</td>
<td>.000</td>
</tr>
<tr>
<td>Sub-index F</td>
<td>56.425</td>
<td>65.987</td>
<td>54.489</td>
<td>184.706</td>
<td>.000</td>
</tr>
<tr>
<td>Sub-index G</td>
<td>44.120</td>
<td>58.657</td>
<td>41.194</td>
<td>479.938</td>
<td>.000</td>
</tr>
<tr>
<td>Sub-index O</td>
<td>54.569</td>
<td>56.634</td>
<td>54.150</td>
<td>1.319</td>
<td>.252</td>
</tr>
<tr>
<td>Sub-index S</td>
<td>36.454</td>
<td>69.737</td>
<td>29.714</td>
<td>470.209</td>
<td>.000</td>
</tr>
<tr>
<td>T&amp;D Index</td>
<td>51.290</td>
<td>62.628</td>
<td>48.994</td>
<td>419.065</td>
<td>.000</td>
</tr>
<tr>
<td>PBR</td>
<td>2.045</td>
<td>2.400</td>
<td>1.973</td>
<td>.830</td>
<td>.363</td>
</tr>
<tr>
<td>ROA</td>
<td>1.533</td>
<td>7.476</td>
<td>0.329</td>
<td>4.772</td>
<td>.030</td>
</tr>
<tr>
<td>Operating Profit Rate</td>
<td>2.217</td>
<td>19.459</td>
<td>-1.275</td>
<td>14.842</td>
<td>.000</td>
</tr>
<tr>
<td>Age (Months)</td>
<td>173.192</td>
<td>303.597</td>
<td>154.578</td>
<td>64.552</td>
<td>.000</td>
</tr>
<tr>
<td>Assets (Billion Wonb)</td>
<td>2862.383</td>
<td>16741.744</td>
<td>51.373</td>
<td>136.266</td>
<td>.000</td>
</tr>
<tr>
<td>Equity/Assets</td>
<td>0.642</td>
<td>0.503</td>
<td>0.670</td>
<td>21.749</td>
<td>.000</td>
</tr>
<tr>
<td>Liability/Equity</td>
<td>0.938</td>
<td>1.870</td>
<td>0.749</td>
<td>9.656</td>
<td>.002</td>
</tr>
<tr>
<td>R&amp;D/Sales</td>
<td>0.046</td>
<td>0.009</td>
<td>0.053</td>
<td>2.815</td>
<td>.095</td>
</tr>
<tr>
<td>Cash/Assets</td>
<td>0.188</td>
<td>0.082</td>
<td>0.209</td>
<td>25.351</td>
<td>.000</td>
</tr>
<tr>
<td>Foreign Ownership (percent)</td>
<td>8.605</td>
<td>30.545</td>
<td>4.162</td>
<td>230.274</td>
<td>.000</td>
</tr>
<tr>
<td>Sole Ownership (percent)</td>
<td>31.955</td>
<td>31.353</td>
<td>32.076</td>
<td>0.102</td>
<td>.749</td>
</tr>
<tr>
<td>Months Listed</td>
<td>64.496</td>
<td>163.907</td>
<td>53.394</td>
<td>95.296</td>
<td>.000</td>
</tr>
</tbody>
</table>

* In the case of ROE, we have 235 results of venture firms, because two firms are in the condition of impaired capital.

b Unit of currency in Korea

Among the sub-indices of corporate transparency, the average of the social transparency scores is lowest, and the average of the governance transparency score is also lower than that of the financial transparency score and the operational transparency score, in the total sample. The largest difference between large companies and ventures is shown on the score of social transparency, and that is 40.023. From the comparison of corporate transparency scores of the large companies with those of the ventures, we can conclude that the level of corporate transparency between large firms and ventures is significantly different. In addition, except for operational transparency, the average score of all sub-indices of corporate transparency is different between large companies and ventures. Basically, in financial
transparency, the difference between large companies and ventures is not huge, because the disclosure item and procedure of financial information is strictly stipulated when a firm prepares an annual report. On the other hand, governance transparency, which has fewer compulsory items than financial transparency, so that governance transparency differs more between large companies and ventures. In particular, social transparency which has annexed characteristics, such as autonomic disclosure of corporate information, social contribution and ethical management, has a large difference between large companies and ventures.

In the case of performance factors, PBR, which represents firm value, is not significantly different between large firms and ventures, while ROA, operating profit rate and age of the firm has significant difference between these two groups. The difference in the operating profit rate is more obvious than the case of ROA. Therefore, we expect a positive relationship between corporate transparency and firm profitability and firm sustainability from the results of the comparison between large companies and venture firms. However, it is not probable that corporate transparency has a positive effect on firm value according to the result of the descriptive statistics.

The descriptive statistics of our control variables are also shown in Table 2. As a result, large companies generally have much more assets, much more liability relative to equity, larger foreign ownership, and a longer history on the stock market than venture firms. On the other hand, venture firms try to invest much more money on R&D activities, and retain much more cash relative to their assets in order to secure liquidity.

Table 3 shows the distribution in the overall score and sub-indices score of corporate transparency, and the T&D score of the large companies and ventures. In the comparison of large companies and ventures, we can find that the gap in the overall corporate transparency score is about 20 points, and that the difference in the sub-indices score of corporate transparency is at least about 10 points (Sub-index F) to about 40 points (Sub-index S). From the distribution of corporate transparency scores for large companies and ventures, we can definitely distinguish the difference in terms of the level of corporate transparency between large companies and ventures.
### Table 3
Distribution of Corporate Transparency Scores for Large Companies and Venture Firms (2007)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of companies</th>
<th>0-10</th>
<th>10-20</th>
<th>20-30</th>
<th>30-40</th>
<th>40-50</th>
<th>50-60</th>
<th>60-70</th>
<th>70-80</th>
<th>80-90</th>
<th>90-100</th>
</tr>
</thead>
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Relationship between Corporate Transparency and Venture Firms’ Performance

This study aims to examine the relationship between corporate transparency, as measured by the corporate transparency index that we suggested, and the firm performance of 237 Korean ventures. We use price-to-book ratio (PBR) as a proxy for a company’s market valuation. Firm profitability can be explained by return on assets (ROA) and operating profit rate (OPR). Age of the firm (Age) represents firm sustainability. To deal with the endogeneity problem between firm performance and corporate transparency indices, we insert a comprehensive set of control variables from previous studies into the regression model. These control variables help to reduce the omitted variable bias, as well as the potential endogeneity problem (Cheung et al. 2008). Before conducting the regression analysis, we examine the correlations among corporate transparency indices and control variables (Table 4).

In Table 5, we regress PBR, ROA, OPR and Age against the overall corporate transparency index, industry dummies, and control variables by the Ordinary Least Squares (OLS) regression method. We calculate White robust standard errors adjusted for heteroscedasticity, if it exists in the regression model. In addition, we conduct regressions between these firm performance factors and the T&D index to check robustness and compare them with the results of our index. In the case of PBR, which represents firm value, both of the overall transparency index and the T&D index is not significantly associated with PBR. However, ownership concentration (sole ownership) negatively affects a firm’s market valuation, as we predicted. The two models of PBR have relatively low values of R-squared.

In the case of firm profitability, our corporate transparency index positively affects ROA and OPR. A one point increase in the corporate transparency index of a firm can raise its ROA 0.412 percent and its OPR 0.819 percent. However, we cannot find significant effects of the T&D index on ROA and OPR.

19 The overall index has positive and significant correlation coefficients, which ranged from 0.51 to 0.66, on its sub-indices. In addition, the overall index is positively correlated (0.84) with the T&D index. On the other hand, we cannot find a coefficient which is more than 0.30 in the relations among sub-indices. Therefore, we conclude that our sub-indices are well-composed without an overlapping effect among sub-indices and our transparency index can replace the T&D index. We also cannot find significantly high correlation coefficients among the control variables.
which represents firm profitability. Among our control variables, assets, equity/assets, R&D/sales, and duration of being listed on the stock market (Months Listed) are selected as the determinants of ROA. The positive effect of assets on ROA is reasonable, because venture firms generally have a small amount of assets, so that they cannot all have chances of high-return business. Therefore, the firm which has much more assets can have much more business chances, allowing it to have a higher ROA. The proportion of equity in assets is also positively correlated with ROA. This finding explains why equity has cheaper funding costs than liability, because liability has interest expenses. On the other hand, R&D expenditure is negatively correlated with ROA. Because R&D is a kind of long-term investment for future profit, the short-term effect of R&D expenditure on ROA can be only negative. The negative effect of Months Listed on ROA reflects the fact that fast-growing firms are usually newly listed on the stock market.

The results of control variables in the model of OPR have important things to explain the determinants of firm profitability. Equity/assets, R&D/sales, and Months Listed have the same signs of coefficients, as in the case of ROA. On the other hand, liability/equity negatively affects OPR. This result means that liability weighs heavily upon a firm’s financial condition because of its interest expenses. The positive and significant coefficient of foreign ownership shows the fact that foreign investors generally force management to make a short-term profit more than the Korean investors. In addition, we find the opposite effect of sole ownership on OPR to that on PBR. This finding shows that even though ownership concentration reduces a firm’s market valuation, it enhances firm profitability, because it helps to manage the venture firm in a more stable manner.

Finally, a firm’s corporate transparency score is positively and significantly associated with its age, a measure which represents firm sustainability, as we predicted. In addition, we also find that ownership concentration helps the firm to sustain itself for a long time. This fact is consistent with our expectation. A firm with high ownership concentration has the power to resist external attacks for management rights through such means as a hostile M&A, so that the owner of the venture can make a firm sustainable.
Table 4  
Correlation Analysis

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NOTE: Correlation is significant at *5 percent, **1 percent
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<th>Firm Sustainability</th>
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<td>4.10***</td>
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**NOTE:** Significant results at *10 percent, **5 percent, ***1 percent are shown in **boldface**. T-statistics, based on White’s heteroscedasticity-consistent standard errors, except for ‘Age’ model, are reported in parentheses.
From the regression analysis about the relationship between corporate transparency and firm performance in Korean ventures, we can find that overall corporate transparency positively affects firm profitability and firm sustainability, even if it is not related with a company’s market valuation. On the other hand, the T&D index is not a determinant of firm performance factors. Therefore, we can conclude that the corporate transparency index we suggested explains the relation with firm performance factors better than S&P’s T&D index.

Table 6 contains our OLS results for four sub-indices of our corporate transparency index. In the case of firm value, there is no significant sub-index that affects corporate PBR. This result is consistent with the case of the overall corporate transparency index. On the other hand, in the case of firm profitability, ROA is positively and significantly affected by financial transparency. In addition, OPR is positively associated with social transparency as well as financial transparency. According to these results, financial transparency plays an important role in enhancing individual firm profitability. A one point increase in the financial transparency score can raise ROA by 0.390 percent and OPR by 0.674 percent, respectively. However, the positive relationship between social transparency and OPR should be examined in detail, because the social transparency sub-index includes three different aspects: public relations, business ethics, and social contribution. In the case of firm sustainability, operational transparency has a positive and significant effect on the age of the firm, while the other three indices are not related with Age. This result reveals that a clear definition of the products and services which the firm produces, providing a proper understanding of the markets and industrial environments in which the firm does business, can form the foundation for firm’s sustainability. In all of the cases examined, the significant factors among control variables are the same as in the case of the overall corporate transparency index.
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<td>0.674** (2.34)</td>
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<td>6.476 (1.86)</td>
<td>-129.441 (-4.72)</td>
<td>-76.820 (-3.32)</td>
</tr>
<tr>
<td>R²</td>
<td>0.272</td>
<td>0.648</td>
<td>0.723</td>
</tr>
<tr>
<td>F-stat</td>
<td>3.62***</td>
<td>8.89***</td>
<td>35.64***</td>
</tr>
</tbody>
</table>

NOTE: Significant results at *10 percent, **5 percent, ***1 percent are shown in **boldface**. *T*-statistics, based on White's heteroscedasticity-consistent standard errors, except for 'Age' model, are reported in parentheses.
In conclusion, we can find no significant relationship between the sub-indices of corporate transparency and firm value. In addition, the level of operational transparency positively affects the age of the firm which represents firm sustainability. On the other hand, financial transparency is a key factor in firm profitability. OPR is also associated with social transparency. We will investigate the reasons for these results in detail through the segmentation of our four sub-indices (we call these segments ‘sub-components’) in the next section.

**Relationship between Sub-components of Corporate Transparency and Firm Performance**

We investigated how our corporate transparency and its sub-indices affect firm performance so far. In this time, we classify four sub-indices into several sub-components respectively, and we examine whether these sub-components significantly affect firm performance, in detail.

Table 7 shows our four sub-indices and sub-components of our corporate transparency index, and their important related stakeholders. For convenience, each sub-component is coded into ‘F1’, ‘F2’, …, ‘S2’, ‘S3’. Each sub-component consists of 5 to 24 items, and the way to score the sub-component is the same as the case of the overall index and sub-index. However, in the case of Sub-index F and Sub-index S, the sum of the number of items in the sub-components comprising the sub-index is not equivalent to the total number of items in the sub-index, because the items that could not be included in our sub-components, by characteristics, are not counted.

Each sub-component of the corporate transparency index can directly or indirectly affect various groups of stakeholder (Table 7). Most of the sub-components are related with shareholders, investors, and creditors, while certain sub-components can be associated with governments, customers, suppliers, local communities, and the public.
Table 7
Sub-components of Corporate Transparency Index and Related Stakeholders

<table>
<thead>
<tr>
<th>Section</th>
<th>Code</th>
<th>Sub-components</th>
<th>Number of Items</th>
<th>Important Related Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Transparency</td>
<td>F1</td>
<td>Accounting Information</td>
<td>18</td>
<td>Shareholders, Investors, Creditors</td>
</tr>
<tr>
<td></td>
<td>F2</td>
<td>Accounting Policy &amp; Method</td>
<td>9</td>
<td>Shareholders, Investors, Creditors, Governments</td>
</tr>
<tr>
<td></td>
<td>F3</td>
<td>Additional Financial Information</td>
<td>7</td>
<td>Shareholders, Investors, Creditors</td>
</tr>
<tr>
<td>Governance Transparency</td>
<td>G1</td>
<td>Ownership &amp; Governance Structure</td>
<td>24</td>
<td>Shareholders</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>Investor Relations</td>
<td>11</td>
<td>Shareholders, Investors</td>
</tr>
<tr>
<td></td>
<td>G3</td>
<td>Directors &amp; Managers</td>
<td>14</td>
<td>Shareholders, Investors, Employees</td>
</tr>
<tr>
<td></td>
<td>G4</td>
<td>Board Process</td>
<td>18</td>
<td>Shareholders, Investors</td>
</tr>
<tr>
<td></td>
<td>G5</td>
<td>Executive Compensation</td>
<td>9</td>
<td>Shareholders, Investors, Employees</td>
</tr>
<tr>
<td>Operational Transparency</td>
<td>O1</td>
<td>Product, Service &amp; Business</td>
<td>10</td>
<td>Shareholders, Investors, Customers, Public</td>
</tr>
<tr>
<td></td>
<td>O2</td>
<td>Industry &amp; Business Environment</td>
<td>7</td>
<td>Shareholders, Investors, Suppliers</td>
</tr>
<tr>
<td>Social Transparency</td>
<td>S1</td>
<td>Public Relations</td>
<td>5</td>
<td>Shareholders, Investors, Customers, Employees, Public</td>
</tr>
<tr>
<td></td>
<td>S2</td>
<td>Business Ethics</td>
<td>6</td>
<td>Customers, Suppliers, Employees, Public</td>
</tr>
<tr>
<td></td>
<td>S3</td>
<td>Social Contribution</td>
<td>5</td>
<td>Local communities, Public</td>
</tr>
</tbody>
</table>

Table 8 contains the regression results of the sub-components and firm performance factors. Before going into further detail on the results, we explain the procedure for this regression analysis. In order to examine the effect of individual sub-components on firm performance factors as dependent variables, we replace the overall index in the previous regressions by the score of sub-components. We represent these results in the columns “Alone” that are located on the left side of each performance factor’s column in Table 8. Same set of control variables in the previous regressions are included in the regression model, however the coefficients of the control variables are omitted in Table 8.

The regressions in “Alone” may overstate the power of individual sub-components, most of which correlate with the (omitted) rest of the overall corporate transparency index. Therefore, following the study of Black, Jang, and Kim (2006), we gain a more precise effect from the sub-component, adding two control variables: (i) a “Reduced Index” (overall index - the sub-index to which the sub-component belongs); (ii) a “Reduced Sub-index” containing the other sub-components of the sub-index to which
the sub-component belongs. For example, in the regression for the sub-component *Accounting Information* (F1), we include controls for (i) the overall score of governance, operational, and social transparency; (ii) the firm’s score on a reduced financial transparency sub-index consisting of *Accounting Policy & Method* (F2) and *Additional Financial Information* (F3). The resulting effect of an individual sub-component is represented in the columns “With Controls”, on the right side of each performance factor. As in the “Alone” regressions, we include the same set of controls in the “With Controls” regressions, and omit the coefficients of the controls, because the result of each sub-component should be shown in each row of Table 8.

With regard to the results in Table 8, the significant sub-components for firm performance factor by “Alone” are equivalent to those by “With Controls”, even though the values of coefficients from these two approaches differ only slightly. In the significant factors that affect firm performance from Table 8, we find some interesting results. While PBR is not affected by the overall corporate transparency index and its sub-indices, *Social Contribution* (S3) has a positive and significant effect on PBR. The insignificant relationship between social transparency and PBR is caused by two other sub-components of the social transparency sub-index, except for *Social Contribution*. This finding explains that corporate activities for social contributions and their sincere disclosure to the public enhance firm value in the stock market. However, we find that the other sub-components have no relationship to PBR.

On the other hand, ROA and OPR are positively and significantly correlated with *Additional Financial Information* (F3). This fact explains that the positive coefficients of financial transparency on ROA and OPR in Table 6 are induced by F3, because most of the items in *Accounting Information* (F1) and *Accounting Policy & Method* (F2) are compulsory disclosure items for the writing of a corporate annual report. In addition, because F3 contains items about additional information such as earnings forecast, investment plans, and dividend policies, we can find that the competences for forecasting and managing future earnings and investment plans positively affect firm profitability.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Firm Value</th>
<th>Firm Profitability</th>
<th>Firm Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PBR</td>
<td>ROA</td>
<td>OPR</td>
</tr>
<tr>
<td></td>
<td>Alone</td>
<td>With Controls</td>
<td>Alone</td>
</tr>
<tr>
<td>Accounting Information (F1)</td>
<td>-0.020</td>
<td>-0.017</td>
<td>0.176</td>
</tr>
<tr>
<td></td>
<td>(-0.78)</td>
<td>(-0.68)</td>
<td>(1.21)</td>
</tr>
<tr>
<td>Accounting Policy &amp; Method (F2)</td>
<td>-0.093</td>
<td>-0.087</td>
<td>-0.265</td>
</tr>
<tr>
<td></td>
<td>(-0.83)</td>
<td>(-0.81)</td>
<td>(-0.96)</td>
</tr>
<tr>
<td>Additional Financial Information (F3)</td>
<td>-0.021</td>
<td>-0.020</td>
<td>0.164***</td>
</tr>
<tr>
<td></td>
<td>(-1.57)</td>
<td>(-1.63)</td>
<td>(2.85)</td>
</tr>
<tr>
<td>Ownership &amp; Governance Structure (G1)</td>
<td>-0.007</td>
<td>-0.009</td>
<td>0.110</td>
</tr>
<tr>
<td></td>
<td>(-0.48)</td>
<td>(-0.61)</td>
<td>(0.81)</td>
</tr>
<tr>
<td>Investor Relations (G2)</td>
<td>-0.020</td>
<td>-0.023</td>
<td>-0.241</td>
</tr>
<tr>
<td></td>
<td>(-0.55)</td>
<td>(-0.63)</td>
<td>(-1.02)</td>
</tr>
<tr>
<td>Directors &amp; Managers (G3)</td>
<td>-0.002</td>
<td>-0.001</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>(-0.14)</td>
<td>(-0.14)</td>
<td>(0.60)</td>
</tr>
<tr>
<td>Board Process (G4)</td>
<td>0.049</td>
<td>0.051</td>
<td>-0.362*</td>
</tr>
<tr>
<td></td>
<td>(1.51)</td>
<td>(1.44)</td>
<td>(-1.86)</td>
</tr>
<tr>
<td>Executive Compensation (G5)</td>
<td>0.018</td>
<td>0.017</td>
<td>-0.107</td>
</tr>
<tr>
<td></td>
<td>(1.28)</td>
<td>(1.28)</td>
<td>(-1.16)</td>
</tr>
<tr>
<td>Product, Service &amp; Business (O1)</td>
<td>-0.013</td>
<td>-0.013</td>
<td>0.058</td>
</tr>
<tr>
<td></td>
<td>(-0.98)</td>
<td>(-1.04)</td>
<td>(0.97)</td>
</tr>
<tr>
<td>Industry &amp; Business Environment (O2)</td>
<td>-0.004</td>
<td>0.000</td>
<td>0.106**</td>
</tr>
<tr>
<td></td>
<td>(-0.34)</td>
<td>(0.01)</td>
<td>(2.01)</td>
</tr>
<tr>
<td>Public Relations (S1)</td>
<td>0.006</td>
<td>0.007</td>
<td>0.078</td>
</tr>
<tr>
<td></td>
<td>(1.01)</td>
<td>(1.05)</td>
<td>(1.43)</td>
</tr>
<tr>
<td>Business Ethics (S2)</td>
<td>0.002</td>
<td>0.001</td>
<td>-0.071</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.10)</td>
<td>(-0.95)</td>
</tr>
<tr>
<td>Social Contribution (S3)</td>
<td>0.084**</td>
<td>0.086*</td>
<td>-0.144</td>
</tr>
<tr>
<td></td>
<td>(1.99)</td>
<td>(1.93)</td>
<td>(-1.40)</td>
</tr>
</tbody>
</table>

**NOTE:** Significant results at *10 percent, **5 percent, ***1 percent are shown in boldface. T-statistics, based on White's heteroscedasticity-consistent standard errors, except for 'Age' model, are reported in parentheses. Industry dummies are included.
OPR is positively affected by Public Relations (S1). This result is the reason for the positive relationship between social transparency and OPR in Table 6. Business Ethics (S2) and Social Contribution (S3) are the factors that have a long-term effect, rather than a short-term effect, meaning that S2 and S3 have no relationship with a firm’s short-term profitability. On the other hand, S1 is composed of items that affect profits in the relatively short term, such as firm’s investor relations activity and corporate website. We expect that this inference may be proved by inserting average long-term profit rate.

Board Process (G4) and Industry & Business Environment (O2) as well as F3 have significant effects on ROA, and Ownership & Governance Structure (G1) is correlated with OPR. The negative effect of G4 on ROA is not consistent with our expectation. This finding explains that the complexity of operating organizations and various committees in the board of corporation hinders the right and speedy decisions for corporate profitability. On the other hand, the positive coefficient of O2 for ROA shows that the firm can enhance the firm’s profit rate through a clear understanding and sincere disclosure of the competition in the market and the industry. In the case of OPR, the positive relationship between G1 and OPR implies that the more transparent the corporate governance and ownership structure are, the higher the firm’s profit rate becomes.

The age of the firm is affected by both internal and external operational transparency sub-components (O1 and O2). There is no significant factor among the other sub-components of our corporate transparency index.

In conclusion, corporate value is clearly connected with firms’ activities for social contribution. In addition, firm profitability can be enhanced by disclosing a wide range of financial information. Finally, operational transparency guarantees the firm sustainability.
Conclusion

Expanding the scope of the parties affected by corporate transparency from the investor or the shareholder to include other stakeholders and regional society, we propose a new corporate transparency index adding the part of operational transparency and social transparency to financial transparency and governance transparency. Based on the T&D index developed by Standard & Poor's, the most popular index of corporate transparency, we add some evaluation items from various indices in the previous literature, and classify them into these four sub-indices.

We select 237 venture firms listed on the ‘KOSDAQ Venture Index’ and 48 large companies listed on the ‘KOSPI 50’ in Korea, and evaluate individual corporate transparency, investigating annual reports and other various sources. As a result, large firms are more transparent than ventures in terms of our corporate transparency index as well as the T&D index. In addition, the scores of the sub-indices of our corporate transparency index show differences between large firms and ventures. In particular, the social transparency score of large firms overwhelms that of ventures.

Having the transparency scores of 237 venture firms, we conduct an empirical analysis in order to investigate the relationship between corporate transparency and firm performance. We consider firm value, firm profitability, and firm sustainability, and select price-to-book ratio (PBR), return on assets (ROA) and operating profit rate (OPR), Age of the firm (Age) as dependent variables, respectively. Corporate transparency scores are independent variables. We also include various control variables.

From the regression analysis, we can find that an overall corporate transparency has positive effects on ROA, OPR, and Age. These results show that corporate transparency can enhance firm profitability and firm sustainability, while it cannot raise a company’s market valuation. On the other hand, the T&D index is not a determinant of firm performance factors. Therefore, we can conclude that a corporate transparency index we suggested explains the relation with firm performance factors better than the
T&D index of S&P. In the case of the sub-indices, we can find that there is no significant relationship between the sub-indices of corporate transparency and PBR. However, operational transparency positively affects the age of the firm (Age) which represents firm sustainability. This result explains that a clear definition of the products and services which the firm produces and provides, and a proper understanding of markets and industries, are important for a firm’s survival. On the other hand, financial transparency is a key factor in firm profitability (ROA and OPR). OPR is also associated with social transparency. By classifying four sub-indices of our transparency index into 13 sub-components in order to examine the effect of these sub-components on firm performance, we find some interesting results. From our analysis, we find that corporate transparency can enhance corporate profitability and sustainability. Especially, financial transparency plays an important role in firm profitability. In addition, social transparency can increase a firm’s profit, and operational transparency heightens a firm’s sustainability.

The evidence from Korean ventures, we conclude that venture firms should try to take the following actions in order to enhance their firm performance. First, they should strive to perform activities for corporate social responsibility in order to raise their corporate value. Second, for firm profitability, they should disclose a wide spectrum of corporate financial information and maintain a transparent ownership and governance structure. In addition, they should deliver information about their industry and business environment in a precise and accurate manner, and try to perform public relations activities. Finally, the firm should be eager to heighten operational transparency in order to make the firm sustainable.
References


## Appendix 1: The Question List of Corporate Transparency Index

<table>
<thead>
<tr>
<th>Section</th>
<th>Questions</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Transparency (36 items)</td>
<td>*Does the company report basic earnings forecast of any kind?</td>
<td>T&amp;D, CGS, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company report basic earnings forecast in detail?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company give characteristics of assets employed?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide efficiency indicators (ROA, ROE, and so forth)?</td>
<td>T&amp;D, CLSA, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose its plans for investment in the coming years?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose details of its investment plans in the coming years?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Provide financial information on a quarterly basis?</td>
<td>T&amp;D, CLSA, Cheung, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company discuss its accounting policy?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose accounting standards it uses for its accounts?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide accounts according to the local accounting standards?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide accounts in alternate internationally recognized accounting method?</td>
<td>T&amp;D, CLSA, Cheung, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide the balance sheet by internationally recognized methods?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide the income statement by internationally recognized methods?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide the cash-flow statement by internationally recognized methods?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td></td>
<td>*Does the company provide a reconciliation of its domestic accounts to internationally recognized methods?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose methods of asset valuation?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose information on method of fixed assets depreciation?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company produce consolidated financial statements?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company disclose the name of its auditing firm?</td>
<td>T&amp;D, Cheung, Kang</td>
</tr>
<tr>
<td></td>
<td>*Does the company reproduce the auditors' report?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td></td>
<td>*Disclose how much it pays in audit fees to the auditor?</td>
<td>T&amp;D, Cheung, Kang</td>
</tr>
<tr>
<td></td>
<td>*Disclose any non-audit fees paid to auditor?</td>
<td>T&amp;D, Cheung, Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the dividend policy, providing the amount and explanation?</td>
<td>Cheung</td>
</tr>
<tr>
<td></td>
<td>Is the financial report disclosed in a timely manner? (year 2008)</td>
<td>CLSA, Cheung</td>
</tr>
<tr>
<td></td>
<td>**Does the company modify the annual report? (year 2008)</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>Does the company give dividends to shareholders annually or semiannually?</td>
<td>CGS, Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the condition of long-term loans payable?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the redemption plan of long-term loans payable?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the condition of short-term loans payable?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the redemption plan of short-term loans payable?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company have a rule about using reception expenses or secret service expenses?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the type of business, products, assets, sales of affiliates?</td>
<td>Kang</td>
</tr>
<tr>
<td></td>
<td>Does the company disclose the payment guarantees and the amount of securities offered to affiliates?</td>
<td>Kang</td>
</tr>
<tr>
<td>Governance Transparency (76 items)</td>
<td>Does the company disclose sales amount by product/service line?</td>
<td>Kang</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>** Does the company disclose cost of sales by product/service line?</td>
<td>Kang</td>
<td></td>
</tr>
<tr>
<td>** Does the company have the experts of accounting or disclosure? (lawyers, accountants, tax accountants, or the experts with Ph.D. in all related fields)</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>*Provide a description of share classes?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Provide a review of shareholders by type?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Provide the number of issued ordinary shares?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide the number of authorized but non-issued ordinary shares?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide par value of issued ordinary shares?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide par value of authorized but non-issued ordinary shares?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide the number of issued shares of preferred, non-voting, and other classes?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide par value of issued shares of preferred, non-voting, and other classes?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Provide par value of authorized but non-issued shares of preferred, non-voting, and other classes?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Does the company disclose the voting rights for each class of shares?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Top 1 shareholder disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Top 3 shareholders disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Top 5 shareholders disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Top 10 shareholders disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Shareholders owning more than 10 percent are disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Shareholders owning more than 5 percent are disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Shareholders owning more than 3 percent are disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Does the company disclose percentage of cross-ownership?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a calendar of important shareholder dates?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Review of shareholder meetings (could be minutes)?</td>
<td>T&amp;D, Cheung</td>
<td></td>
</tr>
<tr>
<td>*Describe the process for proposals at shareholder meetings?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*How the shareholders convene an extraordinary general meeting?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*How the shareholders nominate directors to board?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Describe the process of putting inquiry to board?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Does the annual report refer to Corporate Governance Charter or Code of Best Practice?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Does the annual report publish Corporate Governance Charter or Code of Best Practice?</td>
<td>T&amp;D, CLSA</td>
<td></td>
</tr>
<tr>
<td>*Are the Articles of Association or Charter Articles of Incorporation published?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Provide a list of affiliates in which it holds a minority stake?</td>
<td>T&amp;D, Cheung, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>*Does the company disclose the ownership structure of affiliates?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a list/register of related party transactions?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a list/register of group transactions?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Company(s)</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>*Is there a chairman listed?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Detail about the chairman (other than name/title)?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Is there a list of board members (names)?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Are there details about directors (other than name/title)?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Details about current employment/position of directors provided?</td>
<td>T&amp;D, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>*Are details about previous employment/position of directors provided?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Disclose when each of the directors joined the board?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Classifies directors as an executive or an outside director?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Details about role of the board of directors at the company?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Is there disclosed a list of matters reserved for the board?</td>
<td>T&amp;D, CLSA</td>
<td></td>
</tr>
<tr>
<td>*Is there a list of board committees?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Review last board meeting (could be minutes)?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there an audit committee?</td>
<td>T&amp;D, CLSA, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Disclosure of names on audit committee?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a remuneration/compensation committee?</td>
<td>T&amp;D, CLSA, Cheung, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>*Names on remuneration/compensation committee?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a nomination committee?</td>
<td>T&amp;D, CLSA, Cheung, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>*Disclosure of names on nomination committee?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Other internal audit functions besides audit committee?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Is there a strategy/investment/finance committee?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Disclose whether they provide director training?</td>
<td>T&amp;D, Cheung</td>
<td></td>
</tr>
<tr>
<td>*Discuss the number of shares in the company held by directors?</td>
<td>T&amp;D, Cheung, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>*Discuss decision-making process of directors' pay?</td>
<td>T&amp;D, Cheung</td>
<td></td>
</tr>
<tr>
<td>*Are specifics of directors' salaries disclosed (numbers)?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Form of directors' salaries disclosed (cash, shares, and so forth)?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*Specifics disclosed on performance-related pay for directors?</td>
<td>T&amp;D</td>
<td></td>
</tr>
<tr>
<td>*List of the senior managers (not on the board of directors)?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Backgrounds of senior managers disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Number of shares held by the senior managers disclosed?</td>
<td>T&amp;D, Cheung</td>
<td></td>
</tr>
<tr>
<td>*Discuss the decision-making of managers' (not board) pay?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>*Number of managers' (not on board) salaries disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Form of managers' (not on board) salaries disclosed?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Specifics disclosed on performance-related pay for managers?</td>
<td>T&amp;D, Kang</td>
<td></td>
</tr>
<tr>
<td>*Details of the CEO's contract disclosed?</td>
<td>T&amp;D, Cheung, Kang</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Is the chairman an independent, non-executive director?</td>
<td>CLSA, CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>Are there any foreign nationals on the board?</td>
<td>CLSA</td>
<td></td>
</tr>
<tr>
<td>Does company have cumulative voting method at shareholder meetings?</td>
<td>CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>Does company have written or electronic ballot system?</td>
<td>CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>Does the board have operation rules?</td>
<td>CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>Is there an attendance list of board meeting?</td>
<td>CGS, Kang</td>
<td></td>
</tr>
<tr>
<td>Does the company disclose the number of board meeting held?</td>
<td>Kang</td>
<td></td>
</tr>
<tr>
<td>**Does the company carry ‘director’s and officer’s liability &amp; company reimbursement insurance’?</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>**Does the company disclose its succession plan and succession procedure for the CEO or other top management?</td>
<td>New</td>
<td></td>
</tr>
</tbody>
</table>

**Operational Transparency (17 items)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Is there a discussion of corporate strategy?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td>*Report details of the kind of business it is in?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td>*Does the company give an overview of trends in its industry?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td>*Report details of the products or services produced/provided?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td>*Provide a segment analysis, broken down by business line?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td>*Does the company disclose its market share for any or all of its businesses?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td>*Disclose output in physical terms?</td>
<td>T&amp;D, Kang</td>
</tr>
<tr>
<td>*Does the company give an output forecast of any kind?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td>*Does the company provide any industry-specific ratio?</td>
<td>T&amp;D</td>
</tr>
<tr>
<td>Does the annual report include business operation and competitive position?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Does the annual report disclose operating risks?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Does the company disclose the production capacity of products or services produced/provided?</td>
<td>Kang</td>
</tr>
<tr>
<td>Does the company disclose the volume of production and sales by product/service line?</td>
<td>Kang</td>
</tr>
<tr>
<td>Is there a list of major buyers of the company?</td>
<td>Kang</td>
</tr>
<tr>
<td>Is there a list of major suppliers of the company?</td>
<td>Kang</td>
</tr>
<tr>
<td>Report movements of prices of key products?</td>
<td>Kang</td>
</tr>
<tr>
<td>Report movements of prices of raw materials?</td>
<td>Kang</td>
</tr>
</tbody>
</table>

**Social Transparency (19 items)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the company issued a &quot;mission/vision statement&quot;?</td>
<td>CLSA, Cheung</td>
</tr>
<tr>
<td>Does the company have own domestic language website about itself?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Does the company have an English language website about itself?</td>
<td>CLSA</td>
</tr>
<tr>
<td>Does the company have any events about investor relations? (year 2007 - 2008)</td>
<td>CLSA</td>
</tr>
<tr>
<td>** Does the company have an ‘Investor Relations’ section on the website?</td>
<td>New</td>
</tr>
<tr>
<td>Does the company have an explicit (clearly worded) public policy statement that emphasizes strict ethical behavior?</td>
<td>CLSA, Cheung, CGS, Kang</td>
</tr>
<tr>
<td>Does the company have an action plan for enhancement of corporate transparency and business ethics?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company have an evaluation system about the level of observance of action items for enhancement of corporate transparency and business ethics?</td>
<td>FKI</td>
</tr>
<tr>
<td>Question</td>
<td>Source</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Does the company have education programs for enhancement of corporate transparency and business ethics?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company have an independent department for enhancement of corporate transparency and business ethics?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company have protection instruments of ‘whistle-blowing’?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company do any CSR activity?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company publish an annual CSR report?</td>
<td>FKI</td>
</tr>
<tr>
<td>Disclose budget and expenses on CSR activities and expenses on CSR/sales ratio?</td>
<td>FKI</td>
</tr>
<tr>
<td>Does the company have an explicit equal employment policy?</td>
<td>CLSA</td>
</tr>
<tr>
<td>Does the company have an explicit environmental policy?</td>
<td>CLSA, Cheung</td>
</tr>
<tr>
<td>Does the company explicitly mention the safety and welfare of its employees?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Does the company explicitly mention the role of key stakeholders such as customers or the community?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Does the company provide an ESOP (employee share option program), or other long-term employee incentive plan linked to shareholder value creation, to employees?</td>
<td>Cheung</td>
</tr>
<tr>
<td>Are there published reports by financial analysts for investors? (year 2007 - 2008)</td>
<td>Bushman</td>
</tr>
</tbody>
</table>

**NOTE 1:** T&D = T&D Index of S&P; CGS = CGS Index; CLSA = CLSA Index; Kang = Kang et al. (2007); Cheung = Cheung et al. (2008); FKI = Matrix of Ethical Management by Federation of Korean Industries; Bushman = Bushman, Piotroski, and Smith (2004)

**NOTE 2:** * listed on T&D Index, ** not listed on previous index, in other words, new item that we developed.
Exploring the determinants of entrepreneurship among new graduates: implications for an effective entrepreneurial marketing

Principal Topic and Research Question

Entrepreneurs are key contributors to the growth and dynamics of the economy and one possible solution to overcome underdevelopment. Several researchers focused on this key-role of entrepreneurship and the dynamics it creates (Vesper, 1983; Davidson, 1988; Smith et al, 1989; Gartner, 1990; Vankataraman, 1997; Shane et Vankataraman, 2000; Bush et al 2003). In several emergent countries, this matter of fact led governments to develop national programs to encourage citizens to innovate, create firms, and henceforth contribute to reducing unemployment. One of the major policies oriented towards reaching this end is the development of an appropriate education system that would train future risk-takers and give them the necessary knowledge (Barney, 1991; Grant en 1995), skills and know-how in order to succeed in their initiatives. Another way of fostering entrepreneurship is to guarantee the access to funding and assistance during and after the firm creating process. Tunisia is an example of those countries which adopted both of these priorities. In this country, several laws have been promulgated so as to give all the necessary opportunities to potential entrepreneurs and several institutions have been created to coach them and assist them to materialize their project. However, in spite of all these governmental efforts, new graduates are reluctant to create their own firms even if “entrepreneurship” is their specialty. Many of them tend to look for a job in a company, preferring a security option to a hazardous one. This research study aims at understanding inhibitors and motivations of newly graduated citizens to create their own firm and identifying on which major elements entrepreneurial marketing should focus to lead citizens to put a lot of themselves into a business creation activity.
Methodology

In order to reach this objective and to better understand the reality of entrepreneurship in the Tunisian context, semi-directive in-depth interviews were conducted among 26 informants. Half of the sample was made of entrepreneurs, and the other half of newly graduates in entrepreneurship that didn’t go through the business creation process. During the interviews, we aimed at obtaining testimonies and opinions about the factors that led some informants to create their own business, the obstacles they have undergone as well as the impediments that were faced by the non-entrepreneurs. The interviews were tape-recorded, and then transcribed, in order to proceed to a thematic analysis using the Nvivo software.

Contributions

The conducted interviews enabled to draw out a significant number of inhibitors and motivations, some of them echoing those already emphasized in the literature, and some others specific to a context of an emergent country. The most important obstacle to going through the entrepreneurial process is linked to the lack of funding. Several other major inhibitors have been highlighted during the thematic analysis: beyond psychological factors such as risk aversion and a low level of self-esteem, more specific inhibitors have been found: the administration heaviness and the complexity of the formalities that should be gone through, as well as the economic and political situation. As far as the motivations are concerned, several of them are linked to the individual profile of the informant: the educational background, the will to have higher revenue, and reach self-realization, as well as self-confidence. Several others are rather sociological factors such as social recognition, the family context, the strength of family links and regional considerations. A third group of motivations is linked to the governmental efforts done to foster entrepreneurship: the
opportunities materialized by state grants-in-aid and supports and learning opportunities (Wood & Pearson, 2009) in the field of firm creation. Furthermore, by creating their own firm, informants declared that they were motivated by creating favorable working conditions: going beyond the dissatisfaction they lived in their former job, protecting themselves from the ubiquitous shadow of unemployment, and being their own boss. The last part of this paper is a reflection on how entrepreneurial marketing should be implemented in order to achieve effectiveness while trying to foster entrepreneurship and encourage new graduates to venture to create their own business (Morris et al., 2002; Hills et al., 2008).
Evaluating Indian women entrepreneurs in the informal sector: marginalization dynamics or rational economic choice?

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Abstract -
Studies on women entrepreneurs in the informal economy no longer view them as a residue of a pre-modern regime that is disappearing. Instead, they are either read through a structuralist lens as marginalised populations engaged in low quality work or through a neo-liberal lens as engaged in relatively higher quality endeavour more as a rational choice. The aim of this paper is to evaluate critically these contrasting explanations. To do this, the results of face-to-face interviews with 323 women entrepreneurs operating in the Indian informal economy are analysed. The findings show that although the structuralist representation is largely appropriate for women engaged in informal waged work, it is not so valid for women informal entrepreneurs working on a self-employed basis where incomes are higher, they receive more credit from formal institutions, union membership is higher and such work is more likely to be a rational choice on the part of these women. The outcome is a call to move beyond using only one of these explanations as universally applicable and instead to recognise that a more comprehensive understanding is needed to capture the diversity amongst women in the informal sector.

Keywords: self employed women; entrepreneurship; informal economy; India
Introduction

Since the turn of the millennium, it has been widely recognised that informal employment is a sizeable and expanding feature of the contemporary global economy (Charmes 2009; Feige and Urban 2008; ILO 2002 a,b; Jütting and Laiglesia 2009; Rodgers and Williams 2009; Schneider 2008). Indeed, a recent OECD report finds that out of a global working population of some 3 billion, nearly two-thirds (1.8 billion) are informal workers (Jütting and Laiglesia 2009). Conventionally, such work was assumed to be low-paid waged employment. Recently, however, a large proportion has been shown to be conducted on a self-employed basis: 70 per cent in sub-Saharan Africa, 62 per cent in North Africa, 60 per cent in Latin America and 59 per cent in Asia (ILO 2002b). Rather than depict informal workers as low-paid waged employees, therefore, such workers have started to be portrayed as entrepreneurs and as displaying entrepreneurial attributes, traits and qualities (ILO 2002a,b; Small Business Council 2004; Venkatesh 2006; Volkov 2002; Webb et al. 2009; Williams 2006, 2007). The aim of this paper is to further contribute to this literature on informal entrepreneurship by reporting a study of women informal entrepreneurs in India. Until now, a widespread assumption has been that such women engaged in informal entrepreneurship are necessity-entrepreneurs engaged in low-paid, menial, exploitative work in the absence of alternative means of livelihood (Chen et al. 2004; ILO 2002a). In this paper, the intention is to evaluate critically whether this is always the case.

In the first section, therefore, the literature will be briefly reviewed that has so far been written on entrepreneurs operating in the informal economy in general and women informal entrepreneurs more particularly. The second section then outlines the methodology used to study women informal entrepreneurs in India followed in the third section by the findings and then a discussion of the findings. The outcome will be to reveal that it is too simple to depict all women
operating in the informal economy to be engaged in low-paid poor quality work out of economic necessity. Our results show that both necessity and choice are co present motives for the women entrepreneurs. While the women entrepreneurs may have entered the informal system due to economic necessity, they operate within this sector as a rational economic choice.

Before commencing, however, it is necessary to define what is here meant by informal entrepreneurship. Given that entrepreneurship has been a problematic and elusive concept for a long time and, as Anderson and Starnawska (2008: 222) state, ‘entrepreneurship means different things to different people’, a working definition is here employed appropriate to the task. Here, an entrepreneur is defined as somebody actively involved in starting a business or is the owner/manager of a business (Harding et al 2006; Reynolds et al 2003), and informal work as monetary transactions not declared to the state for tax and/or benefit purposes but which are legal in all other respects (e.g., European Commission 2007; Evans et al 2006; Williams 2006).

**Women and entrepreneurship in the informal sector**

For most of the last century, it was widely assumed that there was an extensive and growing formal economy and a separate small and gradually disappearing informal economy. Entrepreneurs operating in the informal economy, such as street hawkers and peddlers, were thus widely depicted as simply a residue or leftover from an earlier mode of production and as rapidly disappearing with modernity as activities previously conducted in the informal sector became incorporated into the modern formal economy. Conceptualised in this manner, the persistence of informal entrepreneurs signalled ‘under-development’, ‘traditionalism’ and ‘backwardness’
whilst the advent of the formal economy represented ‘progress’, ‘development’ and ‘advancement’ (Geertz 1963; Carr and Chen 2002, 2004).

Since the turn of the millennium, however, a small but expanding tributary of thought has transcended this traditional depiction of informal entrepreneurship as a residue and disappearing. Instead, a growing number of studies have revealed that both the informal economy in general (Charmes 2009; Feige and Urban 2008; ILO 2002a,b; Jütting and Laiglesia 2009; OECD 2002; Schneider 2008; Schneider 2008; Williams 2006), and informal entrepreneurship more particularly (De Soto 2001; Minard 2009; Small Business Council 2004; Venkatesh 2006; Volkov 2002; Webb et al. 2009; Williams 2006, 2007; Williams and Round 2007, 2008; Williams et al. 2009), is extensive, persistent and even growing in many populations. The outcome has been the advent of various new explanations for the continuation and expansion of informal entrepreneurship.

On the one hand, and perhaps the most dominant representation of informal entrepreneurship is that which depicts it as a form of low quality work conducted under poor conditions for low pay by populations marginalised from the formal economy and who conduct such endeavour out of necessity in the absence of alternative means of livelihood. In this view, informal entrepreneurship is often seen to have emerged as a direct by-product of the advent of a de-regulated open world economy (Amin et al. 2002; Castells and Portes 1989; Gallin 2001; Hudson 2005; Portes 1994;Sassen 1997). From street-sellers in the Dominican Republic (e.g. Itzigsohn 2000) and Somalia (Little 2003), through informal self-employment in garment businesses in India (e.g., Das 2003; Unni and Rani 2003) and the Philippines (Doane et al. 2003), to home-based micro-enterprises in Mexico (e.g., Staudt 1998) and Martinique (Browne 2004), the consensus is that this is a sphere which people enter out of necessity as a survival strategy.
and that it is low paid insecure work conducted under poor conditions (e.g., Itzigsohn 2000; Otero 1994; Rakowski 1994). Informal entrepreneurs, in other words, are portrayed as unwilling and unfortunate pawns within an exploitative global economic system in which work is becoming ever more precarious and poorly paid.

Such a structuralist explanation is particularly prevalent when examining the informal economy in India in which some 93 percent of India’s working population is employed and of this workforce, some 30 percent are women (ILO 2002a,b). Seen through this lens, such entrepreneurship is seen as an absorber of surplus labour, provider of income earning opportunities for the poor, a provider of goods and services that are often unavailable in the formal sector and a primary means of maintaining a low cost of living by providing cheaper goods and services than would otherwise be the case (Bhatt 2006; Kapoor 2007; Pradhan 1998; Williams 2005; Nelson and Bruijn 2005). Indeed, jobs like cart vending, hawking, small store vendors, road side cobbling, pedal rickshaw driving and domestic home-help are commonly depicted by this structuralist perspective as the types of jobs conducted by informal entrepreneurs in developing nations, and although the correlation is not perfect, informal work is seen as inter-related to poverty and such entrepreneurship is portrayed as comprising highly insecure and unstable work, long hours of work, poor conditions, no legal or social protection, limited access to credit and very limited bargaining power (ILO 2002a,b; Lund and Srinivas 2000; Kapoor 2007).

On another hand, however, a rather different representation of informal entrepreneurship has emerged which explains its continuation and expansion in a rather different manner akin to the rational choice framework of Ostrom (1999).¹ For a group of neo-liberal commentators, that is, the growth of informal entrepreneurship clearly displays how large numbers of people have

voluntarily exited the formal economy. For these neo-liberals, therefore, informal entrepreneurs are not the product of involuntary exclusion but instead are heroes throwing off the shackles of a burdensome state (e.g., Sauvy 1984; De Soto 1989) and the direct result of the over-regulation of the market (Minc 1982; Sauvy 1984; de Soto 1989). Informal entrepreneurs thus voluntarily choose to operate off-the-books so as to avoid the costs, time and effort of formal registration (Cross and Morales 2007; de Soto 1989, 2001; Perry and Maloney 2007; Small Business Council 2004). For De Soto (1989: 255) in consequence, ‘the real problem is not so much informality as formality’.

Informal entrepreneurship is thus viewed as the people’s ‘spontaneous and creative response to the state’s incapacity to satisfy the basic needs of the impoverished masses’ (De Soto 1989: xiv-xv), emerges as a populist reaction to over-regulation and government oppression, and is seen to offer potential benefits not found in formal economy, including flexible hours, job training, and entry to the labour force, opportunity for economic independence and better wages and avoidance of taxes and inefficient government regulation (Maloney 2004). It is a rational economic strategy pursued by entrepreneurs whose spirit is stifled by state-imposed institutional constraints.

Until now, although some studies have evaluated the validity these contrasting explanations in relation to western economies, and transition economies, such as East-Central European nations ((See Williams and Winderbank 2003; Williams 2009a,b; Aldrich 1999; Aldrich et al. 1989; Nelson and Bruijn 2005; Jütting and Laiglesia 2009), few if any have evaluated the validity of them in relation to developing nations and even fewer have evaluated which of them is more relevant in relation to women informal entrepreneurs. Indeed, the only instance in which this has been investigated, which was in the transition economy of Ukraine,
found that women were largely ‘reluctant’ entrepreneurs and men more commonly chiefly ‘willing’ entrepreneurs (Williams 2009a). Here, in consequence, the validity of these contrasting explanations is evaluated in relation to women informal entrepreneurs in India.

In India, previous studies have identified how many women engaged in the informal sector participate in entrepreneurial endeavour (ILO 2006a,b; Bhatt 2006; Mehrotra and Biggeri 2002). However, most of this literature on women engaged in informal entrepreneurship has concentrated on measuring the amount and nature of their access to credit, welfare funds, insurance and so forth. These studies reveal four key findings. Firstly, their work typically operates at very low levels of organization and scale. The reliance on day-to-day profits for survival is high as they have little or no access to institutional credit (Schneider and Bajada 2003). Secondly, they lack formal space for operations, and have to protect themselves from harassment by local authorities (ILO 2002a, 2006a; Bhalotra 2002; Nelson 1997). Moreover, they face a number of serious health and safety risks including dangerous working conditions and gendered violence. Thirdly, often their work is not constituted as a separate legal entity, independent from the household (Chen et al. 1999, 2004; Bhatt 2006; Charmes 1998a,b). However, these transactions are totally market based, conceded by any formal system or government intervention (Williams and Windebank 2003; Williams 2009a; Carr and Chen 2002,2004). Fourth and finally, their activities tend to get locked within the traditional roles such as selling flowers at the temple, keeping a basket of fruits etc. Furthermore, mobility in search of better location and customers is difficult as they balance vending with taking care of the children alongside (Bhatt 2006; Kapoor 2007). Hence they often contend with insufficient infrastructure and a range of time and space constraints for productivity (Lund and Srinivas 2000; Chant 2007a,b; Gates 2002).
Until now, in consequence, such work has not been studied to evaluate the validity of these contrasting explanations and to begin to unravel the heterogeneity within this sector. In this study we add to this emergent literature on the heterogeneity within the sector through the following:

- Exploring occupational variations for women within this sector, in general.
- Investigate the self employed /entrepreneur women and their work life perceptions, in specific.
- Deliberate on the adequacy of the existing explanations to understand the informal sector and propose alternate explanations.

**METHODOLOGY**

The informal sector heterogeneity was explored through a questionnaire survey, conducted in 2006-07, over a period of seven months. The questionnaire was administered to nearly 323 women working in the Indian informal economy in the form of a face to face interview. The interview became essential mainly because of low literacy levels of the respondents and the sensitivity of the subject matter under investigation. The questionnaire explored workplace structures, economic status, characteristics of operations, the socio-business environment, fears and nature of concerns.

The sample design was stratified random sampling, with convenience sampling at the local level. The sample was taken from cities (1, 2 and 3 tier) from different parts of India. The sample cities were Tier 1 - Mumbai, Bangalore, Delhi, Tier 2 – Nagpur and Jhansi, Tier 3 - Jodhpur and Gulbarga. Four occupational categories are common among informal sector women and were the significant sample, namely, vendors, house helpers, office helpers and shop helpers.
Two of these occupations, namely, vendors and house helpers, reflected some evidence of unionization. While women vendors were common across locations, we found very few women working in commercial and office establishments in the Tier 2 and Tier 3 cities.

Frequency distribution and Kendall's W was used to compare and contrast women entrepreneurs with other occupations. Kendall's W is interpretable as the coefficient of concordance, which is a measure of agreement among raters. As the data captured respondent agreements and perceptions, and the samples were limited and did not meet the condition of normality, this test was considered appropriate for the analysis. In Kendall’s each case is a judge or rater and each variable is an item or person being judged. For each variable, the sum of ranks is computed.

We acknowledge that, considering the cultural and geographical spread of the informal sector in India, the survey may not be representative of either the Indian women workforce or the informal sector at the national scale. Nevertheless, it does provide cross sectional data of various types of informal work and is one of the first surveys to explore workplace heterogeneity and differences in informal work in India.

**RESULTS**

Before examining the results, the validity of the data collection method needs to be discussed. Collecting work life data from the informal economy women was a difficult task. Separating work issues from their family issues was tough for the respondents. For example, in their perception, personal insurance for them was not delinked from their family insurance, and infants and small children were integral part of the workplace (for several vendors and house
What characteristics define the informal sector women as entrepreneurs and in other occupations?

The face of face interviews results of the survey revealed existence of several women entrepreneurs in the Indian informal economy. As illustrated in Table 1, of the people surveyed, about twenty four percent were self employed women. About sixty six percent of these self employed /entrepreneur women were migrants who had moved to their current city of residence. Reasons for migration were better opportunities and marriage. Comparing these women with other professions indicated ‘employment’ as a significant reason for migrating to another city. Moreover, the education level of these women was significantly lower than women in other professions. These entrepreneurs/self employed women were largely uneducated. They had not experienced any formal schooling.

Studies on migration show the impact of this on women. Many of those who migrate to cities in search of jobs find work in the informal (rather than the formal) economy (Carr and Chen 2002, 2004; Charmes 1998a,b, 2009; Government of India 2001). This is due to mainly due to lack of formal opportunities for uneducated women, more so since national economic reforms of 1992 (Government of India 2001; ILO 2006a, b).
Table 1

**Characteristics: Self employed / Entrepreneur and Other Professions**

<table>
<thead>
<tr>
<th></th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Entrepreneurs—self employed vendors</th>
<th>Kendall’s W test of sig. differences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>161</td>
<td>54</td>
<td>32</td>
<td>76</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Average age (years)</strong></td>
<td>33.8</td>
<td>35.6</td>
<td>30.11</td>
<td>33.6</td>
<td>NA</td>
</tr>
<tr>
<td><strong>% migrants</strong></td>
<td>83</td>
<td>19.6</td>
<td>36</td>
<td>66.4</td>
<td>28.85 (.000)</td>
</tr>
<tr>
<td><em><em>Main reasons for migration</em> (&lt;50%)</em>*</td>
<td>Parents moved / marriage</td>
<td>Parents moved / marriage</td>
<td>Marriage</td>
<td>Marriage/ Better opportunities</td>
<td>NA</td>
</tr>
<tr>
<td><strong>% with no formal education</strong></td>
<td>60.2</td>
<td>39.1</td>
<td>20.3</td>
<td>53.9</td>
<td>11.58 (.009)</td>
</tr>
</tbody>
</table>

*marked by atleast 50% of the respondents; NA: Not Applicable

Analysis of response to economic and social support confirmed the lack of social, economic and political power for all women. This has been highlighted by several studies. One, our results highlighted the lack of any market based or government led social and economic security for these women. Two, few of them had access to credit from standard institutions. Friends and informal money lenders were the main creditors. This informal lending setup, however, does not follow standardized interest rates and open these women to severe economic vulnerability (Singh 2005; Fawzi 2003; Kapoor 2007). Since 1990s, Central and State governments in India have promoted several social and economic support schemes for the informal sector and formalized this support through the Micro, Small and Medium Enterprises Development Act, 2006. However, evidently, no benefits have reached the women. This could be either due to lack of access, lack of awareness or cultural constraints which discourage women to go for any social or economic self-support (Singh 2005; Bhatt 2006; Chan 2003; Bhatt 2006). Three, unions were not a popular representation body. While primary reason for lack of
union membership was lack of union presence, the ineffectiveness plaguing the current trade union movement was not lost on the respondents (See Gurtoo 2008a, 2008b). More than fifty percent self employed and shop helps found the unions ineffectiveness as reason for not joining a union. Table 2 illustrates these results.

Studies by Martha Chen and Marilyn Carr (2002, 2004) have highlighted the complexities which keep the informal sector people to remain without basic social facilities despite their contributions to the economy. A mix of factors help explain the persistence and expansion of the informal sector in different countries: the rate and pattern of growth, including the labor-intensity and sectoral composition of growth; economic restructuring or economic crisis, including privatization of public enterprises and cut-backs in public expenditures; and global integration of the economy, including the restructuring of global production characterized by outsourcing or subcontracting (Carr and Chen 2002, 2004; Chen et al. 1999, 2004). Women get over emphasized in these factors due to several reasons: relatively low levels of education and skills, and time and mobility constrains due to social and cultural norms that assign the responsibility for social reproduction to women and discour-age investment in women’s education and training (Carr and Chen 2002, 2004; Chen et al. 2004).

Do the entrepreneurs differentiate with other professions and how?

Analysis of economic variables highlighted subtle but significant differences between occupations. Table 3 illustrates the results. One, the income of the self employed or entrepreneur women was significantly higher than the other groups. The average monthly income of these self employed vendors was nearly fifty percent more than the other groups. Two, these women had no access to funds from any bank or government lending institutions. They depended on friends
and money lenders. This would significantly limit their growth as ventures need capital to expand (ILO 2006a, b; Government of India, 2001).

Analysis of their perception on work, revealed three interesting differences. One, work-life attitude of self-employed women clearly distinguished them from the rest of the informal economy participants. These women did not mark job insecurity as a very significant concern, were significantly confident about their earning potential, and wanted formal training and sought support structures to improve on their work. This was not found significant in other professions. Two, they sought support structures based more in the local community and local professional groups, than traditionally institutionalized trade unions. Three, and significantly, they marked lack of alternate employment as a significant concern (as did house helpers). Tables 3 and 4 illustrate these results.
Table 2

Occupation Wise Response on Economic and Social Support

<table>
<thead>
<tr>
<th></th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Entrepreneurs/ self employed vendors</th>
<th>Kendall’s W test of sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average monthly income (INR)</td>
<td>1824</td>
<td>1810</td>
<td>1926</td>
<td>2554</td>
<td>13.24 (.004)</td>
</tr>
<tr>
<td>Credit from friends/ family (%)</td>
<td>84.6</td>
<td>81.5</td>
<td>85</td>
<td>43.4</td>
<td>NA</td>
</tr>
<tr>
<td>Credit from bank/ institution (%)</td>
<td>4.9</td>
<td>7.4</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Credit from money lenders/ contractors (%)</td>
<td>10.5</td>
<td>11.1</td>
<td>15</td>
<td>38.15</td>
<td>NA</td>
</tr>
<tr>
<td>Union/ association membership (%)</td>
<td>6.8</td>
<td>0</td>
<td>0</td>
<td>5.26</td>
<td>42.26 (.000)</td>
</tr>
<tr>
<td>Main reasons for not joining union/ association (%)</td>
<td>No union; pressure from local community / peer / family</td>
<td>No union; union not helpful</td>
<td>No union; not liked by employer</td>
<td>No union; union not helpful</td>
<td>NA</td>
</tr>
<tr>
<td>Social security* (insurance – life or employment; government funds, welfare scheme; pension, medical benefits) (%)</td>
<td>None</td>
<td>Insurance - &gt;2 medical benefit-&gt;1</td>
<td>None</td>
<td>Insurance - &gt;1</td>
<td>NA</td>
</tr>
</tbody>
</table>

* marked by at least 50% of the respondents; NA: Not Applicable
Table 3

Percentage Response on Attitude and Orientation towards Work* - 1

<table>
<thead>
<tr>
<th>Advantages of your profession</th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Children not neglected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Opportunity to work in various jobs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Community feeling among same profession people</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disadvantages of your profession</th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low and irregular income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Long hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of benefits/social protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of alternative employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Important aspects of a job</th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Nice co-workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Suitable training opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Employer contributions to child care and health service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*marked by more than 50% of the respondents.
Table 4
Percentage Response on Profession Related Variables - 2

<table>
<thead>
<tr>
<th></th>
<th>House helpers</th>
<th>Office helpers</th>
<th>Shop helpers</th>
<th>Vendors</th>
<th>Kendall's W test of sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about job security</td>
<td>64.0</td>
<td>87.3</td>
<td>95.0</td>
<td>43.4</td>
<td>14.16 (.003)</td>
</tr>
<tr>
<td>Sufficient support from seniors</td>
<td>42.2</td>
<td>62.9</td>
<td>90.0</td>
<td>11.84</td>
<td>11.46 (.009)</td>
</tr>
<tr>
<td>Satisfied /happy to work in this occupation</td>
<td>34.8</td>
<td>38.1</td>
<td>87.0</td>
<td>64.2</td>
<td>11.11 (.009)</td>
</tr>
<tr>
<td>Find training for the job would be worthwhile</td>
<td>24.22</td>
<td>7.1</td>
<td>20.0</td>
<td>53.2</td>
<td>16.50 (.001)</td>
</tr>
<tr>
<td>Confident will get money on time</td>
<td>19.3</td>
<td>10.9</td>
<td>12.13</td>
<td>79.1</td>
<td>20.29 (.000)</td>
</tr>
<tr>
<td>Confident that earnings will keep up with the cost of living</td>
<td>25.4</td>
<td>&gt;1.0</td>
<td>&gt;1.0</td>
<td>74.2</td>
<td>44.32 (.000)</td>
</tr>
</tbody>
</table>

These differences clearly illustrated the depiction of informal sector women entrepreneurs in the same way as informal sector waged workers was too simplistic and ignored the heterogeneity existing within this sector. Contrast to structuralist depiction of marginalisation, informal sector entrepreneur women were not so poorly off in their living conditions as well as attitude towards work. Rather, entrepreneurship dynamics had got into play along with their necessity driven initial situation, to generate a rational economic orientation and attitude for work. While they may have entered the informal system due to lack of alternate opportunity, they were positive about the future and were happy to work in this profession. The dynamics inherent in entrepreneurship may have changed the situation and outlook for them. The popular depiction of informal sector using the marginalization approach clearly ignores this agency orientation or how agency influences people and work situations to create its own significant dynamics.
DISCUSSION: WOMEN ENTREPRENEURS

These results clearly presented multi dimensionality in the work-life issues of the women entrepreneurs in this economy. While overall social and welfare based vulnerabilities were significant, economic and attitude variables reflected pragmatism and dynamism in these entrepreneurs. In this they were significantly different from their counterparts in other professions.

Indeed, jobs like cart vending, hawking and road side cobbbling do absorb of surplus labour, provide income earning opportunities for the poor, and provide cheaper goods and services to a large part of the population (PRADHAN 1998; Williams 2005; Nelson and Bruijn 2005). However, the typical depiction of these self employment jobs, through the structuralist perspective, as comprising highly insecure and unstable work, with no formal legal or social protection and limited bargaining power (ILO 2002a,b; Lund and Srinivas 2000; Kapoor 2007), may not be the whole truth.

Continuation and expansion of the informal entrepreneurship can also be explained in a manner akin to the rational choice framework of Ostrom (1999). Informal entrepreneurship is also the people’s ‘spontaneous and creative response to the state’s incapacity to satisfy the basic needs of the impoverished masses’ (De Soto 1989: xiv-xv). It continues as a populist reaction to over-regulation and lack of government support. It is seen to offer potential benefits not found in formal economy, including flexible hours, entry to the labour force for non educated, opportunity for economic independence and opportunity for earning better wages (Gurtoo and Williams, 2009). It is a rational
economic strategy pursued by entrepreneurs whose spirit is stifled by lack of state-institutional support.

The interplay of structuralist and rational choice rules and features can be observed in the analysis of the women entrepreneurs of the informal economy. The women entrepreneurs may have entered this economy and entrepreneurship due to lack of opportunities for uneducated, migrant women in India. The larger Indian social system (social rules) does not allow uneducated, non-local women to have easy access to formal opportunities like a formal job or formal institutional credit (Singh 2005; Mehrotra and Biggeri 2002; Xaba et al. 2002). However, the informal sector self employed women participants had turned this ‘marginalized’ situation into an opportunity. The ‘institutional system’ of entrepreneurship had facilitated this conversion of an adversity into an opportunity.

Thus we see two set of rules (social and entrepreneurial) interacted with each other to influence their decision making. Entrepreneurship is seen to be a combination of entrepreneurial actions, determined by interpretation of opportunities. (Stinchcombe 1965; Aldrich 1999; Pradhan 1989). And we see this through the informal sector self employed, women entrepreneurs.

CONCLUSION

The findings of the study on self employed women, or entrepreneurs, reflected the understanding that actors are seen to take rational decisions based on local socio-politico-
economic understandings of the world. These decisions are, however, at multiple levels and at multiple action spaces. Hence, often at first glance, they seem contradictory.

These results also put the one dimensional and simplistic explanation of ‘marginalization’ of informal sector women under the scanner. They challenge the traditional understanding of small and women entrepreneurs as marginalized and controlled only by socio-economic hierarchies.

Over the past decade or so it has been revealed that a large proportion of informal work is conducted on a self-employed basis: 70% in Sub-Saharan Africa, 62% in North Africa, 60% in Latin America and 59% in Asia (ILO 2002). Moreover, such workers have been widely re-conceptualized as entrepreneurs displaying entrepreneurial attributes, traits and qualities. This more entrepreneurial re-reading of the informal sector first emerged in a majority (Third) World context (Cross 2000; Cross and Morales 2007; De Soto 1989, 2001; ILO 2002). As the ILO (2002, p 54) asserts, the informal sector represents ‘an incubator for business potential and…transitional base for accessibility and graduation to the formal economy’ and informal entrepreneurs display ‘real business acumen, creativity, dynamism and innovation’. A fresh and wider debate on the informal sector dynamics and women led informal entrepreneurship, therefore, is needed to comprehensively understand informal sector and entrepreneurship.
REFERENCES


Women entrepreneurs in the informal sector: marginalization dynamics or rational economic choice?

Under the Theme: Women and Minority Entrepreneurship

ABSTRACT
Informalization of the economy is a widely accepted phenomenon. It covers 35 to 40 percent of the national GDP for several developing economies and plays a major role in the employment creation (ILO, 2002). It absorbs labour surplus, provides income earnings opportunities for the poor, provides goods and services unavailable in the formal sector and helps in maintaining low cost of living by providing cheaper resources of food and services (Chaudhari and Banerjee, 2007; Williams, 2005; Nelson and Bruijn, 2005). These jobs include cart vending, hawking, assistant-ship in small stores, road side cobb ing, pedal rickshaw driving and providing house-help. Though the correlation is not perfect, informal work is linked to poverty due to highly insecure and unstable jobs, long hours of work in poor conditions and no legal or social protection (ILO, 2002; Kapoor 2007).

Ninety three percent of India’s working population is part of this informal sector and out of this workforce about 30 percent are women (ILO, 2002). This paper is an exploration of the work life of these women, with specific focus on the women entrepreneurs of this sector. How do economic liberalization processes sit alongside the socio-economics of the women entrepreneurs in the informal sector? To what extent has it impacted the women entrepreneurs? Specifically, what vulnerabilities, adaptation and attitudes signify their existence? The answers to these questions are deliberated putting the structuralist assumption of “marginalization” under the scanner and exploring the rational choice framework given by Ostrom (1999)1.

Methodology/Key Proposition
The questions were explored through a questionnaire survey, conducted in 2006-07, administered nation wide, taking eight occupational categories. The questionnaire explored workplace structures, economic status, characteristics of operations, the socio-business environment, fears and nature of concerns. The results revealed three significant trends. One, post reform, entrepreneurship and risk taking behaviour had paid better. Women entrepreneurs were earning significantly more than women working in formal established organization. Two, work-life concerns and workplace attitude of entrepreneurs clearly distinguished them from the rest of the informal economy

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participants. Women entrepreneurs did not mark job insecurity as a significant concern, had higher formal education and were confident about their earning potential. Three, the women wanted formal training and sought support structures based more in the local community and local professional groups, than traditionally institutionalized trade unions.

Overall the results gave contradictory explanations of women entrepreneurs. While overall social and welfare based dynamics came as significant, economic and attitude variables became more important in several contexts. What could account for this contradiction? Was there an explanation that could take in both these apparently contradicting results to draw a reliable understanding of women entrepreneurs? Searching for explanations led to an understanding that analyzing both results individually neglected the politics of institutional dynamics, that is, decision making through one set of rules that is part of a system also depends on which other rules are in effect. This configural nature of decision making drives larger group choices.

**Contributions**

This paper challenges the traditional understanding of small and women entrepreneurs as marginalized and controlled by socio-economic hierarchies, and discusses the results in the light of the institutional rational choice framework.

The paper concludes by calling for a fresh and wider debate on the decision making dynamics in women led informal entrepreneurship and also deliberates whether India is witnessing a longer term indirect developmental outcome of empowerment which actively started with government
initiatives like formation of women empowerment cells, formal demarcation of electoral seats for women candidates in several posts, and subsidizing education for the girl child.
Leveraging on networks for the internationalization of SMEs in developing countries: the case of the export consortia in Peru, Morocco Tunisia and Uruguay

Principal Topic and Research Questions

The paper focuses on export consortia of SMEs in developing countries as a tool for the development of intangible resources for internationalisation. The objective is to shed light on the type of resources that are developed within these network arrangements and the processes through which these resources are developed.

The international activities of smaller firms are constrained by several barriers, including their limited endowment of resources and capabilities to invest in exploiting growth opportunities abroad. This is particularly true of SMEs in developing countries, which are characterized by fewer managerial resources, experience and support services in comparison with their counterparts in developed countries. In addition, given their unsophisticated domestic markets, SMEs in developing countries are not used to strong competition and satisfy as needy customers as those that are typically present in developed markets.

It is increasingly acknowledged that firms can increase their export potential by leveraging on networks or collaborative strategies, and combining their resources, knowledge and experiences can lead to more rapid internationalisation. Export consortia are typical examples of such collaborative arrangements, and understanding the impact of these relationships on the firms’ international activities is crucially important.

The main research questions the paper aims to address are the following: to what extent do export consortia help SMEs from developing countries to overcome export barriers? What kind of resources and capabilities do these networks contribute to develop (and how)? What factors do affect the success of export consortia (at both firm-level and consortium-level)? What role is played by network facilitators in enhancing resources and competences transfer among member firms?
The paper starts from a literature review on the factors affecting internationalisation of SMEs, with a particular focus on developing countries. Two theoretical perspectives are particularly useful for the analysis of SME internationalisation: network theory and resource-based view. Then we focus on the characteristics of export consortia as specific network arrangements for the internationalisation of SMEs.

The second part is dedicated to the presentation and discussion of empirical evidence. We specifically focus on the strategies of export consortia and the intangible resources developed by them, from both a static and a dynamic view.

Methodology/Key Preposition

The paper builds on the analysis of nine export consortia - in total involving 56 small to medium sized firms - promoted by UNIDO (United Nations Industrial Development Organization) in developing countries between 2004 and 2007: four in Peru, three in Morocco, and one each in Tunisia and Uruguay.

Data were collected by means of interviews with the consortia managers and entrepreneurs, and cover two levels of analysis: a) consortium; and b) member firms. Two questionnaires were used. The first was submitted to the top manager of each consortium and designed to collect data concerning its characteristics and history, funding and members’ contributions, activities, objectives and strategies, relationships between the consortium and its members, and performance in terms of the opening of new markets for member firms and increasing export sales. The second was submitted to the entrepreneurs to collect information about the member firms.

Our analysis shows that international activities of member firms largely benefit from their participation in export consortia. Greater knowledge of foreign markets, a higher reputation
vis-à-vis foreign customers, development of new business contacts abroad are some of the main results that firms report they have achieved.

A someway unexpected evidence of research is also that benefits of cooperation are not only limited to skills and competencies for competing abroad. Consortia in many cases proved to be a means to develop intangible assets and social capital, which helped their members become more competitive also in their domestic markets.

In some cases, consortia members pooled together their resources for the joint acquisition of equipment, supplies and services (marketing, logistics, training, technical advice, etc.) and thus achieved, as a group, increased bargaining power that allowed them to obtain products and services at better conditions. Furthermore, permanent information exchange between associated SMEs on, for instance, production and human resources management practices contributed to collective company upgrading. This reinforces the idea that networking activities, like those that take place in export consortia, can have positive effects on SMEs in various ways.

**Contributions**

The contributions of the paper are on three levels:

- From the *theory standpoint*, the paper contributes to filling a gap: among different types of SMEs networks, consortia are perhaps the least studied; at the same time, they seem to be effective in meeting the needs of SMEs from developing countries.
- From the *managerial standpoint*, the paper contributes highlighting the key issues to enhance cooperation within consortia: the empirical evidence is that personal and frequent interactions among firms are relevant for the development of trust, which is, in its turn, crucial for cooperation and cohesion of the network.
• At the third level, the paper is relevant for policy makers: the main implication of the study is that policy makers should favour cooperation and that the presence of a network facilitator (which was played by UNIDO in our case) is crucial.
Innovation culture as a crucial role of corporate entrepreneurship and its contribution to entrepreneurial success

Prof. Dr. Andreas Ziltener
Michael Forster

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ABSTRACT. In order to identify innovation culture measures which foster entrepreneurial success, a survey was conducted including 1200 enterprises located in Swiss alpine regions. It proved that a higher amount of new ideas in the innovation pipeline guarantee a higher innovation output, which contributes positively to the increase of sales, and small companies are more likely to succeed through these outputs. Likewise, by actively controlling specific aspects of the innovation culture, the same companies can improve the spirit of corporate entrepreneurship. Determining elements that correlate with growth in sales are tolerance of failure, readiness for change or non-financial staff appreciation.

KEYWORDS. Corporate entrepreneurship, corporate culture, innovation management; entrepreneurial success, innovation culture, innovation structure, dynamic capabilities, alpine regions
We examine the history of a medium sized family firm in rural Hungary, tracking the changes in strategy that have turned it from a near-derelict and bankrupt fish farm in the aftermath of Communism to a highly innovative fishery around which have been built a series of related businesses that together comprise a successful ecotourism destination. The business reflects not only Hungary’s transition from Communism to EU membership, but at the same time reasserts and reinterprets far older farming and cultural traditions in a modern way. The firm is biodiversity friendly – dependent, even – and tries hard to deliver not just economic benefits but also social and environmental ones, but the balance is changing over time.

Keywords: Post Transition, biodiversity, fish farming, Hungary, SME Strategy, Triple Bottom Line

Introduction

We examine the history of the Aranyponty fisheries, a medium sized family firm in rural Hungary, tracking the changes in strategy that have turned it from a near-derelict and bankrupt fish farm in the aftermath of Communism to a highly innovative fishery around which have been built a series of related businesses that together comprise a successful ecotourism destination. The business reflects not only Hungary’s transition from Communism to EU membership, but at the same time reasserts and reinterprets far older farming and cultural traditions in a modern way. The firm tries hard to deliver not just economic benefits but also social and environmental ones; here the balance is changing over time.

1 The early part of this paper draws heavily on material collected by the author and Tim Jones of DJEnvironmental, a UK-based consultancy, as part of an EU project entitled Probioprise. (FP 6: 1.1.6.3/018356.) This was an initiative of Fauna and Flora International, European Bureau for Conservation Development and EFMD (formerly European Foundation for Management Development) on behalf of DG Research which was intended to inform policy towards biodiversity-based entrepreneurship. The public summary report is available as Dickson et al. (2007).
However, the associated businesses which have been stimulated by the fishery and its natural environment are now of equal interest - and perhaps of greater future potential. Since the family took over the ownership of the farm a heritage museum has been developed using original artefacts to display the development of inland fish-farming since early modern times. This formed the nucleus of a complex which now includes a restaurant, hotel and spa. The restaurant features local products – particularly the fish. The buildings are constructed as exemplars of eco-friendly production and low-carbon maintenance. For example, heat pumps are used to tap a geothermal source and the owners are now also examining micro-hydro generation. An increasing market for this part of the business is foreign naturalists (particularly bird-watchers) and sport fishermen. However, to cater for a more local market, festivals are organised throughout the year when local people come to catch fish which then are cooked in the open air to the accompaniment of traditional folk entertainment.

One of the business drivers pushing the diversification is paradoxically the increased costs of operating the farm itself in a Ramsar/Natura 2000 site, where the ‘stewardship’ function is estimated by the Lévais to have increased costs by up to 50%. Producers in protected areas often see expansion into tourism services as an obvious move. However, it is not always easy to achieve success. At Aranyponty there has been considerable investment in diversification, with more people now employed on this side of the business than with fish. Yet the original business still forms the rock on which the enterprise is built, not just conceptually but in terms of income streams.

*Origin and Development of the Fisheries*
The tradition of inland fish production in fishponds, particularly of carp, goes way back into the Middle Ages in Central and Eastern Europe, and nowhere more so than in Hungary. These agro-fishery practices did not die out under communism – indeed, much valuable research work was undertaken at that time and Hungarian advisors helped other countries to establish fisheries of their own. However, that era did see a sustained lack of investment in Hungary’s national infrastructure, including that in fishponds.

There has been fishing along the valley of the Sárvíz River since humans first come to Hungary, and fishponds have been in existence here for more than a century. At that time the present site was part of an estate owned by an important Hungarian landowner, Count Zichy, some of whose family lived in what is now the Fisheries Museum. However, the story of the present incarnation of the Aranyponty and the Rétszilas Fishponds Nature Reserve goes back to 1989, when the predecessor of today’s company – the Association of Small Aranyponty Fish Farmers – was formed by Ferenc Lévai Sr. This was the first private sector fish farming enterprise anywhere in Hungary.

The new company’s initial business areas were domestic and international fish trading, consultancy and the growing of spawn. A head office was set up at Százhalmobatta, with the trading activities carried out from a business park in Gödöllő. It had instant credibility, even in the difficult time of transition, because of the reputation that Ferenc Lévai Sr had already established.

Ferenc Lévai Sr was born in 1950. In 1972 he joined the TEHAG Warm Water Fish Hatchery at Százhalmobatta, where he was central to the major developments that took place in modern farm fishing techniques in Hungary at that time. By the time he left in 1988 he had risen to the post of Assistant Director of the facility. His expertise was
internationally recognised, and he often worked abroad in a consultancy role, establishing new hatcheries in Greece, Sudan, Iraq and – particularly – in Algeria, where he set up a national fresh water fishing system from scratch.

Under Communism, the fishponds were operated by the Mezőfalva Agricultural Combine. After the transition, the first private firm to try farming the fishponds soon went into liquidation. In 1993 the Lévai family took over the lease. A year later, the operation was privatised in an open auction. The Lévais by then thought they knew the potential of the ponds and bid considerably more for the freeholds – 40 million Florints, about €150,000 – than any of their competitors, taking on substantial loans at interest rates of 30% per annum to do so. Many thought them mad to pay this much, and even given their superior, ‘insider’ knowledge, it was still a substantial risk. Under Communism, investment had been neglected. The ponds were overgrown. All the buildings had been stripped out. It took five or six years of hard work and infrastructure investment to put the fishponds back into efficient production. The bank loan taken out to purchase the fishponds in 1994 has now been repaid in full, though the company continues to service a planned level of debt.

The firm now owns about 1000 hectares of fishponds, but the main activity remains at the Örpsuszta-Rétszilas Fishponds, which comprise some 760 hectares. This is also the centre for research and experimentation, as well as for the diversification into a range of related tourism / eco-tourism activities.

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2 At this point the business environment generally was highly uncertain, with elements taken for granted in Western Europe, such as a stable tax regime and well resourced business support agencies, in flux. For example, chambers of commerce initially had public law status on the German model, including obligatory membership introduced from 1994. In 1998 this obligation was removed, although around 60% of firms remained in membership; chambers were also given additional powers from January 1st 2004 in vocational training and other spheres to prepare for EU accession. Similarly, the balance between local and national taxation has changed over this period, which Ferenc Snr noted as having adverse effects. For a critical account of the state of SMEs in Hungary pre- and post-accession see Tibor (2006).
A wide range of fish farming activities is carried out on the basis of polyculture, with carp, Chinese schemer, bighead carp, grass carp, pike, catfish, pike-perch and tench being the main types of fish produced, as well as ornamentals. There is also a deliberate emphasis on the breeding of fish indigenous to the Carpathian Basin, for example: tench, yellow crucian carp, bream, golden orfe, perch and asp.

**Present Structure and Operations**

The business is still headed by Ferenc Lévai Snr and is 95% family owned with just one other shareholder. Within the family, Ferenc Snr controls 50% of shares, with the remainder divided between Ferenc Jnr and his sister. Although now a success in the ‘free-market’ economy, Ferenc Snr’s approach was conditioned by working for 19 years in the state sector where there was never any prospect of additional reward for extra effort or hours worked. Because of this he came to believe that the intrinsic worth of any job was the main reward, an attitude that he transferred into the monetised economy. “Success,” he says, “is when I feel good inside my skin. The best gift is to do what you love to do.” However, this should not be taken as a sign of business naivety; Ferenc Snr can be far sighted and aware of cost trends. He began investing in alternative energy sources in 1990 – as much as a defensive measure as for ecological reasons – when he foresaw energy prices would rise. The first such investment was to use heat pumps to tap a geothermal source. He has subsequently expanded the use of heat-pumps and is now also looking at micro-hydro generation. Ideally he would like the business to be completely independent of external energy suppliers for reasons of both cost reduction and energy security.
Ferenc Jnr came of age during the transition and so was always subject to a wider range of influences than his father. He studied business and economics in the US in 1993-94, and again in 1996-98, and only later obtained a second diploma in fishery management in Hungary. On his return from the States he worked in local government and in the development of industrial parks, only joining his father’s firm in 1999. Although he felt it was “always his destiny” to work with fish, and to do so within the context of the family business, he was not necessarily enthusiastic to do so at first and still speaks about the personal compromises that need to be made in a family firm. Although now central to the business, he still seems keener than his father on maintaining outside interests, such as his consuming hobby of motor sports, where he is a leading rally driver nationally and is known as a very competitive driver.

The business is currently undergoing something of a reorganisation, with a recognition that it is no longer possible or desirable for everything to be run directly by Ferenc Snr. Ferenc Jnr says: “The key strategic decisions are still in my father’s hands, but day-to-day operations will change. Now we often do what is easiest, cheapest or fastest, but these don’t necessarily make the most business sense. We need better cooperation between the different areas of operation”. Recently, responsibility for the three main areas of the business has been allocated to different family members. Ferenc Jnr concentrates on running the technical side of things, ensuring that equipment, machinery and facilities are kept in working order, while his sister is taking charge of tourism development. However, Ferenc Snr is only 60 and shows little sign so far of wanting to withdraw from the business.
There are three principal elements to the business: fish farming, sports fishing and tourism. Farmed fish production and the associated activities still account for around 80% of turnover, with sport fishing accounting for about 10%, as does tourism. However, the balance is expected to change over a 10 year time horizon if current expectations are met. Fish farming will stay much the same in volume terms, although moving to products with a higher added value, while sport fishing is expected to be stable or perhaps grow just a little. The main growth is expected in tourism, which could account for 30-40% of total income in 10 years time. However, people visit Aranyponty for many reasons and to achieve this may require the identification and pursuit of particular niches. Aranyponty currently employs a total of 70 people, including those at satellite locations as far away as Hortobágy. No area of the business is making a loss, but Ferenc Jnr recognises the need for more careful analysis to determine how significant the profits are in relation to the time and effort invested in generating them. More people are employed on the tourism side of the business than in the fishery sector, even though the profits generated by the latter are far greater. Although there is no formal plan, the general strategy is clear and the hope is that the tourism side will eventually prove as profitable.

Labour supply is a challenge throughout the fishery sector, and in the Hungarian economy in general, with a shortage of unskilled/manual labour. The business busses in workers from up to 15km away. The Lévais have learned the hard way that unless they do so employees don’t bother to come in or arrive late. The going rate for employees in the business is typically €1.5 per hour. Pay for men and women is equal, with female staff being perceived as being more reliable than the men. The labour problem became more severe when the authorities clamped down on illegal migrant workers (especially
from Romania and Ukraine), but the recent eastward expansion of the EU may reverse the trend. Unsurprisingly, Aranyponty is looking at mechanisation and automating production wherever possible. In particular it aims to take the physical labour out of tasks in order to recruit more women. These labour issues are another business driver towards the expansion into tourism rather than continuing to grow the fisheries side of the group.

Hungary’s relatively recent accession to the EU increased regulation and to that extent has made running the business more complex. But to set against this there are benefits such as access to some new kinds of grant aid.

The Core Fisheries Businesses

Aranyponty’s principal business is not furnishing fish for the table but rather the supply of live fish for stocking sport-fishing lakes. This accounts for 70% of its fishery production, with the balance going into the human food chain. The sport-fishing market breaks down as follows: 70-75% common carp, 5% carnivorous species (pike, pike-perch, catfish), with the remainder being grass carp and silver carp. The general aim is to provide fish-ponds in Hungary and wholesalers with a wide stock of fish, including plant-eaters, predators and ‘accessory’ fish such as crucian carp and miniature catfish. The export market is concerned primarily with predators, spawn, and materials for use in the organic breeding of fish. Fish are transported in twelve specially adapted lorries, some of which are equipped with liquid oxygen systems, thus enabling the firm to offer delivery of live fish throughout most of Europe all year round regardless of external temperatures.

The fish production side of the business is now well established and stable, with both volumes and prices the same for several years now. In fact, for the Lévais it is too

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3 See Tibor op cit.
stable! Particularly in the market for table fish there seems to be a perception in the marketplace that carp is not a ‘modern’ fish like the ubiquitous salmon and the recently fashionable sea bass; indeed, some analysts feel that demand will actually decline. Fish production for the table has been stagnant in Hungary for some years now. Freshwater fish consumption is relatively low on a national scale, except for the traditional consumption of carp at Christmas. It is seen not only as an old-fashioned foodstuff but an inconvenient one owing to its boniness. Average Hungarian fish consumption is only 3kg per person per year compared with the Western European average of 24kg per person per year. Although 2-3% of the meals consumed in Hungary contain fish, only 1.5% of those eaten by the indigenous population do so.

Prospects for Developing the Core Business

This situation has led to a number of innovations, including an attempt to move to organic production, driven by a search for both higher quality and higher margins; adding value by de-boning; and a hunt for new species which might be farmed successfully for the first time.

The movement towards organic production has been the fastest growing branch of agriculture all over Europe. Inland fisheries are no exception, and the firm has been at the forefront of developments, playing a leading role in the establishment of national standards for organic fish production. Technical procedures were codified and tested in 2001, and the final versions were submitted for international audit. Organic inspections under the new standards regime took place alongside the first conversions to organic production in 2002. Full transition of a pond to organic production takes two years.
Reception in the marketplace was very favourable in terms of quality, but the Hungarian market for organics is not yet well enough developed to bear the price premium. While production costs are comparatively high (the organic feed is of a grade suitable for human consumption and is therefore very costly), the retail premium for organic products is comparatively low and the market (principally exports to Austria and Germany) is small. Organic fish therefore currently represents only 2-3% of the company’s turnover from fish production. Preparation of fish for direct consumption is outsourced, but this is then sold under the Aranyponty brand.

The company is currently experimenting with the farming of pike. Pike are notorious predators, and this is one reason why no one has successfully farmed them before. If successful, this innovation would represent an important commercial breakthrough. Ferenc Lévai Snr also has ideas to experiment with new ‘modern’ fish products that are boneless and able to compete with the trend towards fast or convenience foods. He sees this as a defensive measure which will maintain the existing market but not necessarily expand it, except in niche areas such as hospital food.

**Conservation and Ecotourism Potential**

The Rétszilás fish ponds are located in an area of special environmental interest. At the time the business was being established the area was in the process of being designated as a National Park under Hungarian law and as a Ramsar site under the intergovernmental Convention on Wetlands. It was therefore clear from the outset that the company would have to operate and develop in an eco-conscious manner. This accorded with Ferenc Snr’s values, but were by no means the driving force in developing the business. For this

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4 The area was officially designated a nature reserve, part of the Duna-Ipoly National Park, in 1994.
business, on this site, operating on sound ecological principles normally also makes good economic sense, and the founder is vocal in his identification of the conflicts that do occur. One EU-level issue that rankles with Ferenc Snr is the way in which agri-environmental payments are allocated. At issue is the fact that Aranyponty, as a landowner at a Natura 2000 site, receives exactly the same agri-environment payment as a fish-farm owner at a non-Natura 2000 site although the costs of operation are likely to be higher. Ferenc Snr puts these at 20 to 40% more. He perceives this to be a twofold problem. First, inland fisheries are weak and poorly co-ordinated nationally and internationally compared to marine fisheries. Second, wetlands businesses tend to be small and are poorly able to resist the lobbies of the agricultural and livestock lobbies which are dominated by large MNCs. Since the incentive system does not reward good stewardship, he feels too much is left to his own personal motivation and commitment – which other owner-managers may not share. Thus, because of the designations, Aranyponty cannot always drain out its ponds at the optimum time for fish farming since this may disrupt the life cycle of birds on the site. Although Aranyponty receives some Natura 2000 funds for on-site conservation work, these constraints represent a real cost to the firm.

Although there is a state monitoring system for water quality, Aranyponty has established its own laboratory and undertakes frequent testing. This facility is run by Ferenc Jnr’s wife, Michelle, who is a microbiologist by training. Ferenc Jnr claims that the quality of water leaving the site is usually higher than that coming in and more generally believes that the company has a positive environmental impact. The

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5 While this may in practice be more to do with the Hungarian Government’s allocation of the national envelope, the perception at the firm level is clearly that this is an EU issue.
management of the fishponds prevents them from silting up and becoming progressively vegetated, so that biodiversity would actually be lower without the natural operation of the business.

The area is very important for breeding water birds and for migrating geese and cranes – thousands of geese use the site in autumn. However, the natural endowment covers not just the ponds, fishery and birdlife, but also the production of reeds and willow twigs, and the rearing of indigenous farm animals. There are now thirty grey cattle, fifty racka sheep and ten mangalica swine on site which graze on the grass-covered islands between the ponds. There are also water buffalo.

This rich natural environment, and the protected area status designed to secure it, are used in promoting the site, but this is only beginning to be done in a targeted way. The tourist business attracted so far has only a small eco-tourism component in relation to the burgeoning market and the potential of the site on which the firm is located.

**Diversification into Tourism**

If the Lévai had had rested on their laurels when the fish farming activity was securely in place, the business would have been successful, but little known outside its own locality.

However in 1999, with the production infrastructure in place, the business began to diversify into tourism related activities. As the story is now told, this was not a conscious decision: indeed, Ferenc Lévai Jnr describes his father as an instinctive manager but not a planner. In that year, through personal contacts, the Dutch government offered to part-finance the first (and indeed only) fishing museum in Hungary. This grant amounted to about 30% of the one million Forint cost. It seems that at the time the
motivation for establishing the museum was not tourism related; it was rather a desire to record and celebrate the traditional way of life of the inland fishermen and their families at a time when this was fast disappearing. However, when the museum was completed, it was clear that this was also a tourism asset in its own right. At this point the fishing ponds were opened to a wider public than the serious sport anglers, who were previously the only people fishing them directly. A series of ‘fairs’ was established which included fishing competitions, entertainment, and food and drink. These are now held three times a year and attract approximately 2500 people each time. The most significant fair is that held on St. Peter’s Day. This now includes a ‘Fish Olympics’ in which various fish-related games are organised. Although the site could accommodate far more people the main constraint is the lack of overnight rooms on site or in the vicinity. Consequently almost all participants are from those parts of Hungary where one can travel to and from the fisheries within the day. The business now plans to develop a number of low-priced cabins that families can rent with the aim of attracting visitors to stay for a longer period and increase the spend per head.

Foreign visitors are extremely rare, but no real attempt has been made so far to attract them either to the fairs – or for that matter for longer periods to explore the fishing and wildlife attractions. With one eye to this possibility a spa or ‘Wellness Centre’ has recently been constructed in an attempt to further diversify the range of attractions on offer. The opening of the centre was delayed because of teething problems which the Lévais put down to the difficulty of obtaining good quality basic trade services such as plumbers and electricians in their locality. No real research on how to attract foreign visitors has been undertaken as yet, but there could be good potential for this, because
some people have sought out the site without any real promotion beyond the locality. The fishponds site offers comfortable accommodation and good food with straightforward road links to Budapest airport. Foreign visitors, especially small groups of birdwatchers or other naturalists, artists, photographers, and those with an interest in Hungarian history, culture and music could be attracted to pay a premium price (by local standards) that would still be perceived by the client as representing good value for money (by international standards).

The popularity of the fairs has led to some local companies running ‘family days’ for their employees. Other firms visit the site to combine working conferences with fishing and other touristic pursuits in the afternoon. The existence of markets like this has led to the successive identification of further opportunities such as the development of the fish restaurant (which had started life as a staff restaurant and a place to entertain clients), conference meeting rooms, and the overnight accommodation mentioned above. Recently the facility has also become popular for wedding receptions, birthdays and other celebrations. Most people now visit as part of a group rather than as individuals.

So rather than a planned expansion into tourism, developments have taken place on an ad hoc basis as opportunities have arisen and further needs of existing customers have been identified. The owners describe this as ‘gap filling’: thus the predominance of day fishing led to the provision of cheap accommodation so people can fish for longer; the use of the wellness centre in the summer threw up the idea of making an artificial beach, and so on. The unifying principle seems to be keeping people on site for longer to increase the spend per customer. Future plans seem to confirm this: wine-tasting events; provision of bikes and trails; summer camp activities for the children, etc. Although other
inland fishery establishments in Hungary have followed Aranyponty’s lead into tourism and have some elements of the firm’s marketing offer, the Lévais feel that they have several strengths which will keep them ahead: first mover advantage, which they reinforce through regular innovations such as those above; a more diverse range of services; and the unique quality of their surroundings.6

The Evolving Strategy of Aranyponty

SMEs often do not have a formal planning approach to their development. Sometimes strategy develops as a less formal process, with a post hoc rationalisation of what powerful individuals wanted to do anyway. Equally, successful entrepreneurs are oriented towards identifying and exploiting opportunities as they arise (the ‘gap filling’ that the Lévais describe as one key to their success). Entrepreneurship in the fish farming sector seems rarely studied in a formal way, although Kendree and Stucker (1983) is an interesting early exception and is also case based.

Identifying and analysing strategy in SMEs is notoriously difficult. Whittington (2003) gives an appealing systematisation of different models business strategists have proposed. He suggests strategic management insights can be classified into four main ‘Schools’: Classical, Evolutionary, Processual and Systemic.

Bhalla, Lampel et al. (2009) and Basuki and Watkins (2005) suggest adding the Resource Based View as a distinct ‘School’. They also attempt to test out the validity of these ‘Schools’ — developed largely to analyse strategy within the context of large organisations — to smaller and family based firms. In this they claim some success, while

6 The Lévais are well placed to judge. Another of their business activities is concerned with the technical side of maintaining the quality of other people’s fisheries through their Aranyponty Club Lake Service.
also counselling that it is very difficult to interpret strategic behaviour retrospectively when examining any business cases, where a ‘reading’ of the situation may say more about the analyst’s mental models than the firm’s actual behaviour Bhalla, Henderson et al. (2005).

But however provisional it may be, it is instructive to attempt using this framework – which embraces and structures almost all the ‘classic’ insights into to strategic management – to assess the development of the Aranyponty business from fishponds alone into the basis of a diversified group which sees most future potential in tourism rather than production and processing. In order to do so, we first need to examine in a little more detail what each of these ‘Schools’ actually means. The ‘Classical School’ sees the world as logical, with markets pre-eminent, and profit maximisation as the only goal. Within this context it is possible to plan with some realistic prospect that it will be possible to follow the plan through to completion. This view is represented by the work of Chandler (1962), Ansoff (1965), and the earlier writings of Porter (1980). In direct contrast, the ‘Evolutionary School’ adopts an essentially Darwinian approach in which markets are all-powerful but unpredictable, strategy can only be short term, so any real planning is not only futile but wasteful of resources. This view is represented in the work of Hall and Hitch (1939), Alchian (1950) and Williamson (1975, 1991). The ‘Processual School’ goes beyond traditional economic rationality and contests profit maximisation as the genuine target of firms, which it sees as having multiple objectives reflecting the goals of multiple stakeholders rather than just those of the owners. Behaviour tends to be satisficing rather than maximising, and strategies ‘emerge’ rather than are planned. This view is associated with scholars such as Cyert & March (1963), Simon (1957, 1979),
Pettigrew (1973) and Mintzberg (1978). The ‘Systemic School’ sees strategy as a manifestation of corporate culture. It encompasses planning, but sees the context – and therefore the goals – as not necessarily determined by a purely market perspective. This view is represented in the work of Marris (1964); Granovetter (1985); Swedberg and others (1987). Finally, the Resource Based View – which has been quite prominent in recent years – emphasises strategic intent. It argues that firms can obtain a competitive advantage in the medium term through identifying and developing core competencies, and dynamically harmonising these with market opportunities. This view is associated with Grant (1991), Hamel & Prahalad (1989, 1990), and the later work of Porter (1985).

When Ferenc Snr began his professional career it was under the rigid state-planning system associated with Communism. Although philosophically this was diametrically opposite to the uber-capitalistic world-view of the strategists from the classical school, in formal terms it was paradoxically equivalent in the sense of putting ‘The Plan’ at its heart. Ferenc Snr would have learned through his early experiences that delivery of the plan for the enterprise and business success were by no means equivalent outcomes… So it should come as no surprise that, since Hungary became part of a more marketised economy, the firm has never exhibited the explicit planning characteristics suggested by the classical school.

But nor does the extreme opposite perspective posited by the evolutionary theorists fit terribly well. Although in a general sense extreme market uncertainty was certainly a factor in the immediate post-Communist period, Aranyponty had few effective competitors because of its unique geographical factor endowments (and recall that in less able hands even these had not guaranteed business success). Perhaps the framework
suggested by the evolutionary theorists does not apply well to firms such as Aranyponty in niche markets where entry costs are high? Furthermore, there were clearly ‘plans’ in Ferenc Snr’s mind in a generalised sense, although these were not always business directed in a traditional manner.

Consider next the Resource Based View. It is a truism that any firm relies on its resources, and those at Aranyponty are certainly difficult to replicate, if not totally unique. However, the term ‘resource’ is used by RBV theorists in a more technical sense. It relates to the identification and development of unique competencies within the firm which are difficult to replicate and therefore generate sustained competitive advantage. In this sense the key ‘competencies’ of the firm are wholly technical, deriving initially from Ferenc Snr’s expertise in inland fish farming. The RBV would suggest that in a family firm this competence should be maintained by sending Ferenc Jnr to learn about the most recent technical developments in fish farming and that the firm would remain focussed on this business. Instead, Ferenc Snr sent his son to the USA to learn about modern business methods first, and only later to study aquaculture. Moreover, it has been the physical resources of the firm – in particular those related to its location – which have driven business growth, particularly the diversification into tourism related activity.

The view adopted by the ‘Processual School’ seems to fit the development of Aranyponty much more closely. Throughout, Ferenc Snr has had the multiple objectives one might expect to see and has not attempted to maximise short-run profit. In particular, environmental considerations were well to the fore long in advance of this becoming fashionable. He demonstrated classical satisficing behaviour in trying to live ‘the good life’ in a rural setting with his family rather than maximising his income, for example by
developing his international consultancy opportunities. Overall, in less jargonistic terms, the company’s development strategy under Ferenc Snr appears to have been: wait and see what happens and respond accordingly. This archetypal ‘emergent’ approach has served the business well throughout Ferenc Snr’s tenure in control, although as Aranyponty approaches the key challenge of transition from one generation to another even he is now applying business analysis in a more formal way. He has thus begun to adopt some of his son’s vocabulary and now talks about the firm as “…needing to develop higher value-added products”, such as organic fish. In terms of the Whittington framework this seems to indicate an incipient change in behaviour to one which would be more readily acknowledged by adherents to the ‘Systemic School’. Aranyponty is becoming more planning oriented, but this is firmly rooted in the evolved context, reflecting not just the culture of the locality, but the organisational culture which has developed within the firm itself. This is best demonstrated by the conscious decision to plan a shift in the balance between the different areas of the business, which took place around 2007. The table shows the balance between the three main operating areas some eight years earlier, and the projections a similar period in advance.

These figures represent the targeted percentage share of income, with the fisheries business static in real terms and income growth seen as coming from tourism, at 40% of a larger projected income.

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*General Lessons for SME Development in Rural Areas*

It is always dangerous to try generalising from one very specific case study, but the experiences of Aranyponty do suggest a small number of general lessons.

The first has to do with out-region education. Aranyponty’s founder very early on recognised that the general business skills available to the firm were weaker than the technical ones, which were – and remain – internationally competitive. He therefore sent his son to study not locally but in a location likely to maximise the introduction of new information and thought patterns. It was an added advantage that in so doing his son did not develop close competitive social networks within Hungary, which might have encouraged him to stay in – say – Budapest if he had studied there. In retrospect this seems to have greatly strengthened the likelihood of a successful succession within the firm. This is a much more sophisticated approach than one sees usually in successful rural enterprises where the education and training task is often seen as ensuring succession by ‘cloning’ the founder.

The second has to do with labour supply. The local supply of willing male labour dried up well before the shift towards tourism and was a real constraint on growth. But it
is clear that in comparison to heavier work in all weathers in a ‘fishy’ environment, many of the new jobs on the tourism side of the enterprise – although traditionally equally low paid – are more attractive, and more labour has become available. This seems to be as a result of greater participation in the labour market and is therefore ‘real’ growth rather than displaced activity.

Thirdly, the move into tourism also, in the clichéd language of the SWOT analysis, turns the idyllic location from what was a ‘weakness’ (for a fish farm) into a ‘strength’ (for a sustainable tourism destination). What was formerly a constraint in terms not just of constricted labour supply, but also access to industrial services and elevated logistics costs, now becomes a competitive advantage.

Finally there is a lesson for advisors. Too often advisors come to the rural enterprise sector from a training or consulting background where the norms are to privilege the development of a detailed business plan to achieve financially driven goals around a single business focus: behaviour categorised as falling very much within the classical school of strategic thought above, let alone any of the more recent and sophisticated paradigms. Aranyponty, as the discussion above hopefully shows, does not wholly fit any of the kinds of model developed in the Anglo-Saxon world and in the context of much larger firms. Nevertheless, it has been internationally successful in aquaculture and seems set to repeat this success in tourism.

References


Fighting against the fear of failure in young potential entrepreneurs:

Learning to climb as a metaphor of starting up a new business

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Abstract
Identified as one of the main obstacles to new business creation, fear of failure significantly impacts entrepreneurial self-efficacy beliefs, and therefore entrepreneurial intentions. We examine the role of emotions in the development of entrepreneurial self-efficacy, and emphasize the impact of entrepreneurial education in enhancing students’ ability to cope with stressful negative emotions when confronted with risky situations. Over a period of two years, we studied a cohort of 30 female and male graduate students enrolled in an experiential “climbing and entrepreneurship” program designed to investigate the role of positive and negative emotions on risk propensity and entrepreneurial self-efficacy. The climbing metaphor invited participants to transcend their physical and mental limitations in an attempt to uncover their entrepreneurial potential.

Introduction

Fear of failure was identified as one of the main psychological and cultural obstacles to new business creation, particularly for young potential entrepreneurs (SOFRES 2003; Zhao, Seibert, and Lumpkin 2010). Starting up a new business is often associated with high levels of risk taking, as well as with income and job uncertainty, which may generate a substantial amount of anxiety, and therefore prompt a delay in performing critical behaviors (Atkinson and Birch 1970) or even impede acting in the long-term (Patzelt and Shepherd 2009). Fear of failure is a multidimensional construct, with emotional, cognitive and identity implications: anticipations of failure bring into memory past experiences of shame and embarrassment, and entail the risk of disappointing important others (Conroy 2001). A threat to self-worth (Segal, Chipman, and Glaser 1985), fear of failure may hinder the achievement of one’s potential through generating counter-productive behaviors and thoughts such as self-handicapping and defensive pessimism. When making career decisions, young people
significantly rely on self-efficacy beliefs, which are subjective and sometimes biased perceptions of personal abilities to successfully deal with difficult or stressing situations (Bandura 2001). Entrepreneurial intention models (Krueger, Reilly, and Carsrud 2000) emphasized the central role of self-efficacy beliefs in removing perceptual barriers and helping potential entrepreneurs to effectively cope with their fear of failure so as to handle the complexity of new business creation. Positively associated with entrepreneurial career intentions, self-efficacy and risk-propensity increase when individuals learn to regulate their fear of failure (Vereshchagina and Hopenhayn 2009).

Before living the “excitement, happiness, and flow” that one may experience during the adventure of new business creation (Schindehutte, Morris, and Allen 2006), potential young entrepreneurs may first need to deal with their fear of failure, which is to manage their emotions when confronted with risk-taking situations while trying to achieve their career goals. How do young potential entrepreneurs learn to regulate their negative emotions related to new business creation? How do individuals in stressful and highly-involving situations in order to regulate their fear of failure while simultaneously dealing with physical, psychological and interactional stimuli and issues? What pedagogical situations and methods we may use in order to reduce fear of failure, stimulate risk propensity and increase individual and collective entrepreneurial self-efficacy in student populations?

This paper examines the role of emotions in the development of entrepreneurial self-efficacy, and emphasizes the impact of entrepreneurial education in enhancing students’ ability to cope with stressful negative emotions when confronted with risky situations. Over a period of two years, we studied a cohort of 30 female and male graduate students enrolled in entrepreneurship curricula in two French business schools of Paris region. We elaborated an original research design in order to explore the role of positive and negative emotions on risk propensity and entrepreneurial self-efficacy: a “climbing and entrepreneurship” training program, with ten three-hours sessions of artificial indoor rock climbing and debates on entrepreneurial risk-taking, followed by a one-week gathering of Mountain and ice climbing at Chamonix. We choose rock climbing as a metaphor of entrepreneurial behavior, which involves both technical skills and knowledge, and emotional self-regulation abilities. Starting up a new business may be analyzed as a “limit situation” in Karl Jaspers’ terms: in limit
situations, “we uncover the true depth dimension of the self” (Corrington, 1987). The climbing metaphor invited participants to transcend their own physical and mental limitations in an attempt to uncover their entrepreneurial potential.

After a short literature review on emotions, self-efficacy and entrepreneurship, we present our exploratory research design and methodology, we present our first results and discuss their implications for entrepreneurship education.

**Literature Review**

There is evidence strongly indicating that interactions between emotions and cognition are "continuous and pervasive" (Baron 2008: 328). However, according to Berezin (2003), emotions have been "in disciplinary exile" for a long time, and they are now "reentering sociological and economic analysis" as more consensus has been reached concerning their major role in shaping both the means and the ends of action. Recent research places more emphasis on the role of emotions in the entrepreneurial process at the individual, interpersonal, and organizational level (Baron 2008). In entrepreneurial contexts, emotions influence opportunity recognition, decision-making and problem-solving, as well as coping and working relations (Isen and Labroo 2003; Cropanzano and Wright 1999; Podsakoff and MacKenzie 1997). In student populations, emotions impact entrepreneurial intentions, self-efficacy beliefs and career choices (Baron 2008; Cardon, Wincent, Singh, and Drnovseck 2009).

According to the relational (Lazarus 1991) and the functionalist (Campos and Barrett 1984) models of emotions, affective states reflect the "individual’s goal-directed encounter with the environment", whether an aroused emotion appears as positive or negative depending on whether the individual perceives that the environment “enhances or inhibits goal achievement” (Pfau 2001: 6). Emotions are generated by person-environment relationships that vary over time and contexts, with motivational consequences in triggering processes of establishing, maintaining, or disrupting the relations between the individual and his/her environment (Patzelt and Shepherd 2009).

Our aim is to shed more light on the emotional obstacles that young potential entrepreneurs are confronted with, and to explore the hypothesis that they may progressively learn to overcome these
obstacles through specific pedagogical interventions, initiated in an outdoor, non-conventional classroom environment.

**Enhancing Potential Entrepreneurs’ Self-efficacy**

According to Fayolle and Gailly (2007), entrepreneurial intentions and students’ self-efficacy beliefs are the best indicators of the effectiveness of entrepreneurship education programs, which should therefore focus more extensively on improving the key sources of entrepreneurial self-efficacy (performance accomplishments, vicarious experiences, verbal persuasion, emotional and physiological arousal). Mastery experience is the most influential source of self-efficacy: personal accomplishments increase self-efficacy, whereas personal failures undermine it. Vicarious experience, that is observing other succeed, may bring confidence about personal ability to complete similar activities in order to attain desired goals; vicarious experience is enhanced by perceived similarity between the model and the observer (Kazdin 1976; Schunk 1991) in terms of sex, age and occupation (Schunk 1991). Verbal persuasion may strengthen self-efficacy, by boosting individuals’ motivation to mobilize greater effort and overcome obstacles so as to persist longer and succeed. Emotional and physiological arousal may also become important sources of information influencing self-efficacy beliefs: individuals often analyze their stress reactions and anxieties as signs of vulnerability to poor performance; this is why reducing stress reactions or learning to regulate them is likely to make a difference in challenging entrepreneurial situations.

Pfau and colleagues introduced the notion of “emotional self-efficacy” (2001) to describe the perceived ability to cope with stressful, threatening or difficult situations. Emotional self-efficacy plays a central role in anxiety arousal and regulates risk-taking decisions and behaviors. Pedagogical situations may be structured in ways to build coping skills and enhance students’ beliefs that they can exercise control over their negative emotions when confronted with risky contexts. Guided mastery experiences appear to be an appealing way to help potential entrepreneurs to manage stress and develop their ability to control it, so as to become more effective in their career goals-striving behavior.
The elaboration of pedagogical situations that really enhance entrepreneurial self-efficacy is still at the beginning (Barbosa, Kickul, and Smith, 2008), our hypothesis is that *experiential learning* can assist students in developing their self-confidence and risk-taking propensity while also improving their ability to regulate negative emotions. Experiential education may be useful in identifying and testing pedagogical situations whereby teachers encourage students to *become aware* of their physiological arousal, emotions and moods, and to *detect the effects of their emotions* on their willingness to take risks and their actual goal-performances, and, last but not least, help students to develop concrete strategies to exercise control over their physiological states, moods and emotions.

**Fear of Failure and Risk-taking in Potential Entrepreneurs**

Fear of entrepreneurial failure was identified by the OECD (2003) and the European Commission (2003) as amongst the most important obstacles to engaging in entrepreneurial activities. Entrepreneurial literature indicates a positive correlation between entrepreneurial activity and social tolerance of entrepreneurial failure (Landier 2004). In Europe, apart from the legal and financial consequences implied by bankruptcy, entrepreneurs have to face the “social stigma of failure” which increases the perceived risks associated by young potential entrepreneurs with starting up a new business and produce a dissuasive impact on entrepreneurial intentions.

Economic and psycho sociological literature indicates that risk-taking propensities vary with socioeconomic characteristics, age, sex, education, and professional experience (Vaillant and Lafuente 2007). From a cognitive standpoint, evidence exists that motivations and emotions impact individuals’ risk-taking propensity. McClelland (1961) explained that individuals with high achievement motivation were willing to take moderate risks in order to improve their chances to reach their personal goals, whereas individuals with low levels of achievement motivation were more risk-averse. This hypothesis was confirmed by the affect-as-information theory (Schwartz and Clore 1996) who called into attention the two components of the achievement motivation, the hope for success and the fear of failure, and discovered that individuals with strong hope for success and a weak fear of failure tended
to take moderate risks, whilst individuals with a strong fear of failure were willing to take either extreme risks or low risks.

A consistent finding is that positive moods lead to increased risk aversion, whereas negative moods would increase the likelihood of risk-taking behavior (Nygren, Isen, Taylor, and Dulin 1996). However, recent research stressed that different negative emotions produce distinct effects on decisions and behaviors associated with risk-taking: for example, fearful individuals make pessimistic risk assessments and are systematically risk-avoiding, whereas angry individuals make optimistic risk assessments and express a high risk-taking propensity (Lerner and Keltner 2000); this is because angry individuals may experience a stronger sense of certainty and control, and therefore deploy a risk-seeking behavior, while fearful individuals may rather experience a sense of uncertainty and lack of control triggering a risk-averse orientation (Lerner and Keltner 2001). Similar findings indicate that positive moods enhance individuals’ perceived ability to self-control, and therefore lead to accomplishment behaviors that have short-term costs but long-term benefits; at the opposite, negative moods interfere with performance on self-control behaviors (Fishbach and Labroo 2007).

Fighting against the fear of failure in young potential entrepreneurs and helping them to regulate both their tendencies towards risk aversion and excessive risk-taking is a critical issue for entrepreneurial education, particularly if we take into account the consubstantial link between business and personal risks in an entrepreneurial venture (Watson and Robinson, 2003). According to Weick (1990), fear of failure produces stress that consumes information-processing capacity, with decreasing effects on cognitive efficiency and counter-productive behavioral consequences. However, these emotions can be regulated, and students may learn to do it through structured coping experiences in structured pedagogical environments (Shepherd 2003).

**Developing Emotional Competence in Potential Entrepreneurs**

Emotions encompass “innate action tendencies” (Frijda, Kuipers, and Schure 1989), which can be regulate by the process of *coping* that enables individuals to manage their thoughts and behaviors “according to the demands of situations that are appraised as stressful” (Folkman and Moskowitz
When important personal goals are in danger, coping allows individuals to deal with negative emotions so as to diminish their stress level. Research indicates that the effectiveness of coping strategies depends on whether the stressful situation is perceived as a “threat, loss, or challenge” (McCrae 1984), and whether individuals consider it as “controllable and changeable” (Conway and Terry 1992). Coping strategies are learned cognitive and behavior approaches, which are repeatedly activated when individuals are confronted to fear (which motivates avoidance) or to anger (which motivates attack). Not all coping strategies are favorable to goal-striving; some of them have mainly a self-protecting function, such as denial or rationalization. Entrepreneurial education may improve students’ ability to use effective problem-solving and emotion-regulating coping strategies, in order to both help them manage their anxiety and enhance their goal-persistence (Folkman and Moskowitz 2004).

When confronted with stressing situations, potential young entrepreneurs may be overwhelmed by fear and anxiety (Flett, Blankstein, and Obertinsky 1996), or they may express negative emotions inappropriately, such as anger and hostility (Eisenberg 2001). Recent work on self-efficacy beliefs draw attention to a new hypothesis: individuals deal with their negative moods and feelings more or less effectively because they differ in their perceived capabilities to regulate stressful emotions (Bandura, Caprara, Barbaranelli, Gerbino, and Pastorelli 2003; Caprara 2002). According to Caprara and colleagues (2008), differences in emotional self-efficacy explain inter-individual variation in initiating, avoiding, inhibiting, maintaining, and adjusting personal emotions. In educative settings, authors translate the concept of emotional self-efficacy into the notion of “emotional competence” (Saarni 1999), that is the ability to recognize, express and manage one’s emotions, and the ability to recover after experiencing adversity (resilience). Emotional competence is a main feature of the “personal capital” theorized by Tomer (2003), which designates individual’s self-perception, attitudes, representations and beliefs that “contribute to his/her productivity” (Goldsmith, Veum, and Darity 1997), influence work creativity and is one essential source of economic value creation (Tomer 2003). Improving personal capital is about expanding one’s achievement possibilities, with emotional
competence acknowledged as a key dimension to be developed through learning activities and lifelong experience.

Research Design and Methodology

Over a period of two years, we studied a cohort of 30 female and male volunteer graduate students enrolled in entrepreneurship curricula in two French business schools of Paris region. We elaborated an original field research design in order to study the development of students’ emotional self-efficacy and its effects on the entrepreneurial fear of failure: a “climbing and entrepreneurship” training program, with ten three-hours sessions of artificial indoor rock climbing and debates on entrepreneurial risk-taking and entrepreneurial commitment, followed by a one-week gathering of Mountain and ice climbing at Chamonix. We choose rock climbing as a metaphor of entrepreneurial behavior, which involves both technical skills and knowledge, and emotional self-regulation abilities. Three professors in entrepreneurship were involved in the research, along with a team of five professional rock-climbers. The aim of this exploratory research was to test three main hypotheses:

H1: Entrepreneurial fear of failure in young potential entrepreneurs may be reduced through appropriate pedagogical settings focusing on the development of students’ emotional self-efficacy.

H2: Entrepreneurship education may help students to develop their emotional self-efficacy through progressively confronting them with high-involving and risk-taking situations.

H3: Diminishing fear of entrepreneurial failure may increase entrepreneurial intentions in young potential entrepreneurs, enhance entrepreneurial self-efficacy, and trigger positive attitudes and representations towards an entrepreneurial career choice.

The pedagogical setting was structured in order to enhance students’ situational and personal involvement: prior to the program launching, two debates were organized on the topic of fear of entrepreneurial failure, and participants were strongly encouraged to express their opinions and beliefs, while reacting with respect and tolerance to the others’ views and remarks. We selected participants with no previous rock climbing know-how, and we insisted on the main objective of the program:
enhancing participants’ emotional self-awareness and facilitating self-regulation techniques acquisition in a stressing but secured learning environment. During the two years of field research, we used participant observation, film analysis, questionnaires, and interviews with trainers and participants so as to gather qualitative and quantitative information on individual, inter-individual and group processes. We studied students’ risk perceptions and self-efficacy estimations, attitudes and intentions towards risky behaviors, as well as inter-individual verbal and behavioral interactions and debates linking risk-taking to the decision of starting up a new business.

At the beginning of the first training session, participants were administered Rosenberg Self-esteem scale (Rosenberg, 1960) and they were asked to note down their objectives and expectations about the climbing experience and its perceived relevance regarding entrepreneurship. After each of the training sessions, participants were administrated a self-report questionnaire combining Beck Anxiety Inventory (1979) with questions about their current mood, and the strategies they used during the session in order to regulate their emotions and adjust to the sessions’ objectives in terms of climbing performance. To analyze data, we employed discourse analysis for verbal reports, and we used ANOVA to compare female and male respondents’ variation in self-esteem, self-reported anxiety, entrepreneurial self-efficacy and entrepreneurial intention. We present our first results in the following section.

**Results**

Our findings indicate that entrepreneurial fear of failure in young potential entrepreneurs may be reduced through appropriate pedagogical settings focusing on the development of students’ emotional self-efficacy (H1 confirmed). At the beginning of the program, all participants reported a moderate (male students) to strong (female students) fear of entrepreneurial failure; the main reason of this was either the “fear of negative evaluation of others” or “the fear of losing one’s self-confidence”. At the end of the program, male and female students addressed the issue of the fear of entrepreneurial failure in a different way: they did no longer focus mainly on others’ perceptions and expectations about entrepreneurship, but instead put forward their willingness to take autonomous career decision
and regulate their social fears so as to accomplish their career goals. Participants also highlighted the idea that confronting oneself with risky situations in a group environment facilitate emotions self-regulation, and “give more time and space to build self-confidence”. The program contributed to students’ emotional self-efficacy enhancement through progressively confronting them with high-involving and risk-taking situations (H2 confirmed), but the diminishing of the fear of entrepreneurial failure did not increase entrepreneurial intentions in all participants (H3 partly rejected).

Learning to self-regulate one’s emotions. The ten three-hours sessions of artificial indoor rock climbing and debates on entrepreneurial risk-taking and entrepreneurial commitment were structured as high-involvement pedagogical situations, combining stress and public exposure. Participant observations indicate that male and female students reacted differently in order to self-monitor their behaviors and regulate their emotional states. As a group, male students were more aggressive, competitive, and narcissistic, whereas female students were more prudent, conservative, modest, and risk-avoiding. Results indicate that emotions influenced students’ risk propensity and risk-taking behaviors: consistent with previous literature (Kuvass and Kaufmann 2004), positive emotions triggered risk-avoiding behaviors, whereas negative emotions were associated with risk-seeking decisions, especially in anger or frustration situations. “Fear of falling down” was stronger in female students, whereas male students were systematically worried about their performance level, their main apprehension being that of “not doing things right”, “fast enough”, or “high enough”.

In order to enhance students’ ability to deal with risk-taking situations, trainers decided to use two particular strategies of verbal persuasion: they encouraged female students to trust their own feelings, and to be confident about both their body and their mental strength, while they pushed male students to focus first on their inner thoughts and emotions and be less sensitive to the idea of “competition”. At the end of the ten training sessions, participants were able to identify their emotions and to speak overtly about their fears. Male students understood that fear is a natural reaction and a gatekeeper in dangerous situations. Two key solutions were tested and recognized as resourceful in improving participants’ emotional self-efficacy: reinforcing one’s self-confidence and trusting climbing partners.
Reinforcing one’s self-confidence may be a long process; as for trusting a climbing partner, “that can be even more difficult when the other is a complete stranger or a girl (sic)”.

In terms of coping abilities, students became aware of the fact that both positive and negative emotions can be experienced simultaneously (Fong, 2006), which may render the effort of self-regulation relatively time-consuming and complex. During the final one-week gathering of Mountain and ice climbing at Chamonix, both male and female students demonstrated effective abilities in using positive reappraisal and distancing to reduce stress. At the end of the program, participants’ self-reports indicate increased self-efficacy in managing negative affect and avoid being overcome by irritation, discouragement, or anger; also, we noticed a progressive improvement in students’ well-being and comfort in expressing positive emotions, such as “joy”, “enthusiasm” and “pride”.

The role of the group support in regulating adaptive vs. maladaptive risk-taking propensity. The one-week gathering of Mountain and ice climbing at Chamonix brought into attention an unexpected finding, which is the group influence on emotions regulation. If at the beginning of the program male students were more likely to take risks than female participants, at the end of the training sessions they became aware of the maladaptive consequences of their lack of discernment in pursuing competitive objectives. The male-female interactions and the group discussions about risks perceptions and outcomes made more salient for participants that they regulated their decisions and behaviors according to sex-types normative beliefs that restrained somehow their autonomy and self-determination (Wood, Christensen, Hebl, and Rothgerber 1997). Male students noticed that they, as a group, were more prone to choose performance goals and to express self-control even in perturbing situations in order to preserve their self-image associated with “power, dominance and independence” (ibid.). At the opposite, female students observed that they, as a group, were more oriented towards emotional communication and caring for others. Mixing female with male students in climbing teams was difficult at the beginning of the program, whilst at the end male and female students became aware of their complementary strengths and showed a significant preference to work together rather than in same-sex duos.
Learning to regulate risk-taking behavior challenged therefore some of the stereotypical views about sex-roles, and invited students to increase their sensitivity to the relational dimension of the emotional experience: they realized that one’s emotional expressive behavior may produce an impact on others, they enhanced their ability to discern stress, fatigue and frustration in others, and they learned to share their negative and positive emotions with the group, without fearing to challenge the stereotyped sex-role expectations relative to emotions expression.

*Diminishing the fear of entrepreneurial failure raises entrepreneurial intentions?* At the end of the program, we measured entrepreneurial self-efficacy beliefs and intentions, along with attitudes towards entrepreneurs and entrepreneurship. Male students declared stronger entrepreneurial intentions than female students (p<.04; mean=4,1 vs. mean=2,3; Likert scale with five points), but similar self-efficacy beliefs (mean=3,5 vs. mean=3,2). For female students, the program was extremely beneficial in diminishing fear of entrepreneurial failure, as their anxiety level (measured by the Beck anxiety inventory) was significantly higher at the beginning of the experience than the male students’ anxiety level: they were more scared, feared the worst, and felt nervous; male students expressed their anxiety by the fear of losing control, they felt irritable and unable to relax. A significant finding is the shift we observed in the representations and attitudes towards entrepreneurs and entrepreneurship. At the beginning of the program, students envisioned entrepreneurs as “warriors”, “supermen”, “exceptional human beings”, “able to deal with all kinds of situations”. This heroic image was challenged during the program: at the end, students thought entrepreneurs “are just like you and me”, “passionate people, rather dynamic and ambitious, but also reflection-oriented”, “humble and firm”, “as in rock climbing, an entrepreneur builds a plan before acting, and adjust his/her behavior to the changes in environment”. The heroic image of the lonely entrepreneur was equally challenged by the intense group experience: participants emphasized that “entrepreneurs need the others’ support and trust to succeed” and that they have to” decide what risks to take or to avoid, without knowing for sure that they made the good choice”. Courage, optimism and group support were recognized as the most important coping tools when confronted with stressful situations.
Conclusion

The extent to which entrepreneurship educators emphasize the fear of entrepreneurial failure, and stimulate students’ emotional self-efficacy in order to enhance their ability to cope with stressful situations and take appropriate decisions in risky situations remains one of the major challenges for entrepreneurship education. According to Katz (2003) and Kuratko (2005), there is a lack of accepted paradigms in entrepreneurship education. Moreover, there is a debate in the entrepreneurship community about “whether we can actually teach students to become entrepreneurs” (Fiet 2000). Entrepreneurship educators are testing a wide range of pedagogical approaches and methods in order to increase students’ knowledge and skills to start up a new business after graduation (Carrier 2007; Hindle 2007). However, the use of real-life or virtual cases, as well as role playing and problem-solving may not be the most appropriate tools for helping students to learn how to deal with their own emotions when confronted with risk-taking situations. Experiential learning may be an interesting response to this issue: characterized as “education that occurs as a direct participation in the events of life” (Houle 1980: 221), experiential learning focus on how individuals acquire and transform new experiences in order to produce personal knowledge (Kolb 1984), where “experience is often synonymous with emotions and their deeper meaning” (Kayes 2002: 6-7).

In this paper we emphasized the role of emotions in the development of entrepreneurial self-efficacy, and examined the impact of an original program of entrepreneurial education on students’ ability to cope with stressful negative emotions when confronted with risky rock climbing situations, as a metaphor of entrepreneurial behavior. The strongest limitation of our research is the small sample of 30 female and male graduate students enrolled in entrepreneurship curricula in two French business schools of Paris region, which restrains the generalization of our findings. Additional quantitative research on larger samples is necessary so as to assess the impact of emotional self-efficacy on entrepreneurial intentions, and to measure the effects of various experiential learning methods in stimulating coping abilities in uncertain or dangerous environments.
Authors bios

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Bibliography


Comparison of Student Foundation Propensities Before and During the Economic Crisis
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The article arises from the empirical project “Starting up Businesses and Entrepreneurship by Students” (GEST-study) and compares start-up propensities and entrepreneurial criteria of students surveyed before the economic crisis with students questioned during the crisis. The results highlight that the economic crisis obviously has influencing effects on the students’ entrepreneurship perceptions, diminishes remarkably their start-up propensities and, thus, expectedly also entrepreneurial activities. The students polled during the crisis require stronger elementary start-up sensitizations via courses and show stronger necessity-driven start-up motivations—with hardly positive effects on economic development. Hence, the universities should stimulate more intensely student opportunity entrepreneurship during recessions.

Introduction

The business condition has developed badly since fall 2008 when the financial markets experienced their biggest crash since the world economic crisis 1929. This financial crisis comes along with an economic crisis around the globe, with a long and painful worldwide cyclical downturn, a second world

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economic crisis (Schäfer 2009). During this economic slump the economic situation has been hampered substantially. Mainly the strong negatively affected employment necessitates the most recovery time in the context of crises compared to the other recession indicators, namely industrial output, consumer expenditure, and gross domestic product. End of 2001, for instance, industrial output and gross domestic product increased—although slowly—what indicated the official end of the recession. However, the labor market situation worsened furthermore. In Germany—although without real estate bubble—the export trade declined, and independent research institutes forecast the worst recession since the Second World War. In order to compensate the break of private spending, Europe necessitates a fiscal stimulus by a coordinated conjoint governmental effort of the biggest members of the European Union (Krugman 2009). The German unemployment rate in 2008, indeed, reached its lowest amount since 14 years, but it is expected to increase significantly—like this was the case during the first world economic crisis—, especially if the government and the financial managers fail (Schäfer 2009). Since the 1990’s Europe, an thus Germany, suffered—also in times of a continuous boom—from “eurosclerosis”, that is enduring high unemployment which affected especially the young generation (Krugman 2009).

Besides recommending the German Government what should be undertaken to control the recession, it is beneficial to derive conclusions how to advance entrepreneurial activities that result in job creation. In this connection, the paper aims to investigate the effect of the economic crisis on foundation propensities (start-up propensities) and entrepreneurial criteria of students in Germany, in order to derive conclusions about their requirements and adequate entrepreneurship support measures within a changed economic framework. “Since the difficulty of the labor shortage in a community—exposed in an enduring structural pressure to change within a competitive globalization—particularly affects the generation of young people processing or just having finished their (collegiate) education and looking for work, self-employment as an earning alternative should be directed to this target group in
particular” (Ruda, Martin, and Danko 2009b). However, the actual economic situation and labor shortage should be understood as an opportunity to impart more beneficially entrepreneurial sensitization and competencies particularly to students—mainly in the fields of business administration, engineering, and informatics—as work seekers and potential founders of high potential enterprises that generate steady and skilled employment through seminal innovations (Martin, and Ruda 2001; Koch 2002; Braukmann 2003; Uebelacker 2005; Ofstad 2008; Ruda, Martin, Ascúa, and Danko 2009b; Ruda, Martin, and Danko 2009a), especially because in times of crises a shift from dependent to independent work exists in Germany (Weber 2009; Ruda, Martin, and Danko 2009b). But this shift should not be based on founding motivations from economic necessity but rather on founding motivations from economic self-realization, because of the beneficial effect of precisely opportunity entrepreneurship on economic development (Acs, and Varga 2005; Acs, Desai, and Hessels 2008). When, in this country with—compared to other nations—low entrepreneurial activity quotas (Bosma, and Levie 2010), more students and graduates perceive self-employment as occupational alternative to realize their own business ideas, instead of focusing only on a dependent work, it could thwart this labor scarcity and make an impact on the appropriate reallocation of resources in this economy. On the one hand, the teachability and learnability of entrepreneurial competencies within academic education seem to be empirically confirmed (Kolvereid, and Moen 1997; Tkachev, and Kolvereid 1999; Noel 2001; Varela, and Jimenez 2001; Fayolle 2005; Volery, and Müller 2006), on the other hand influences of the personal career choice as self-extension can be measured, so that individuals who are open-minded and reserved to entrepreneurship are distinguishable (Sinclair 2008). “Only an individual-oriented analysis about constructive or obstructive proceedings within the pre-start-up process will identify how to raise business start-ups in the manner of quantity and quality based on adequate entrepreneurial encouragement, given that finally the students themselves develop their entrepreneurial intention and are the decision-makers regarding their potential start-up activity” (Ruda, Martin, Ascúa, and Danko
 Consequently, comparing students’ entrepreneurial criteria before and during the economic crisis indicates its effect on their propensities to found their own enterprises and, thus, facilitates insights how to accelerate appropriately entrepreneurial intentions of students.

**Research Design**

With a standardized questionnaire, derived from a literature-based and theoretical reference framework of student foundation/start-up propensity (Ruda, Martin, and Danko 2008), more than 2,700 students—both undergraduates as well as postgraduates with several years of work, leadership and start-up experiences—, especially of business administration, engineering, and informatics, have been questioned during their lessons. This methodology counters the weaknesses of internet-based questionings because it facilitates a higher return rate (Müller-Böling, and Klandt 1993; Schnell, Hill, and Esser 1995; Driescher 1999) and deletes self-selection effects of the surveyed students (Brockmann, and Greaney 2006) and, thus, highlights more realistic results.

The survey has been conducted every semester at four German universities (of applied sciences) between the winter term 2006/2007 and the summer term 2009. From this follows that one can contrast students’ entrepreneurial criteria before the economic crisis (1,445 students) with those during the recession (1,281 students), namely the students questioned since fall 2008, when the biggest crash of the financial markets since 1929 started and effected drastically the economies around the globe (Schäfer 2009), who form the group of crisis period.

In order to analyze the start-up propensity in the narrow sense, the *Foundation Ambition Types-Model* has been developed (Ruda, Martin, Ascúa, and Danko 2008). It “shows that a more intense examination of foundation over time enables a gradual or volatile emergence of a stronger foundation

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1 The data of the winter term 2009/2010 has been omitted in order to avoid biases, because in the meanwhile the end of the economic crisis has been communicated in the community so that the student start-up intentions and entrepreneurial criteria could have been influenced again into the other direction.
intention” (Ruda, Martin, and Danko 2009b). Solely such a procedural approach facilitates an appropriate analysis of structural and situative influencing factors on the potentially emerging start-up intention in the scope of the pre-start-up process and considers the necessary target group specification (Ruda, Martin, and Danko 2009a; Ruda, Martin, Ascúa, and Danko 2009a).

Results and Interpretation

The pre-crisis sample (pcs) consists mostly of business administration students (44 percent), followed by engineering (32 percent) and informatics (24 percent) students, whereas in the during-crisis sample (dcs) with 35 percent the majority studies informatics, 32 percent engineering, 26 percent business administration and the rest further subjects. In both samplings beneath one third are females. Students of the pcs tend to be older, 55 percent are between 20 and 25 years old, in the dcs this is case for two thirds. Accordingly, the latter are enrolled in lower semester groups. At this, 23 percent of the pcs are postgraduates and only 14 percent of the dcs.

In view of the Foundation Ambition Types of Ruda, Martin, Ascúa, and Danko (2008) and, thus, of the start-up propensity, the Foundation-layman (has dealt with business venturing not at all) covers in each case the biggest fraction, namely 47.2 percent in the pcs and 55.4 percent in the dcs—a remarkable difference. 11.7 percent of the students surveyed before the crisis can be classified as Foundation-sensitized (has considered business venturing not yet), what is case for 10.3 percent of their during-crisis questioned counterparts. The disparity is again bigger concerning the Foundation-interested (has already considered business venturing but has not started to prepare a business) who represents three tenth of the pcs and 25.9 percent of the dcs. In the former sample the Foundation-preparer (is already engaged in the start-up process) reaches 5.6 percent, in the pcs 4.1 percent. The Founder (has already started a business) eventually, covers 5.5 percent of the pcs and 4.3 percent of the dcs. Altogether the start-up propensity of the students surveyed before the economic crisis is higher
than in the dcs (Figure 1).\textsuperscript{2} Hence, it seems that student start-up propensities are negatively affected by the economic downturn.

**Figure 1**
Foundation Ambition Types

In contrast, two thirds of the students surveyed during the economic crisis estimate the start-up climate in Germany as rather start-up friendly, compared to the half of the pcs.\textsuperscript{3} Despite their lower start-up intentions, the former assumedly perceive the framework for self-employment better than the students surveyed before the crisis. However, 42.5 percent of the dcs are risk averse, compared to 39.1 percent of the pcs—a not significant discrepancy. In contrast, one third of the pre-crisis-surveyed

\textsuperscript{2} The existent divergences are statistically most significant ($p \leq .001$).

\textsuperscript{3} The existent divergences are statistically most significant ($p \leq .001$).
students have a business idea in mind, compared to only one quarter of their counterparts of the dcs.\(^4\) Moreover, the pcs students estimate in average a higher start-up probability\(^5\) (38.5 percent) and shorter founding time\(^6\) (4.5 years) than the dcs students (36.0 percent and 5.0 years). However, when interpreting these results one has to keep in mind some sample differences like age and semester.

In respect of start-up motives, to the students of the pcs realizing own ideas, income and self-actualization are most important, whereas to the students of the dcs beside the latter two the way out of unemployment (the start-up motivation from economic necessity) belongs to the three most relevant start-up motives. Consequently, in times of recessions the push factors may play a more decisive role than in prosperous times. High income and being one’s own boss are further relevant founding motivators to both samples, followed by miscellaneous in the pcs and flexible hours of work in the dcs. Prestige and having power seem to be constantly inconsiderable motivators to found an enterprise. (Figure 2). Table 1 depicts that solely the way out of unemployment, being one’s own boss and miscellaneous differ in statistically significant magnitudes between the two samples. Coinciding with the literarily assumptions, to the students of the dcs the necessity-driven start-up motivation is de facto more important, whereas autonomy and miscellaneous factors are more decisive to the students of the pcs.

36.5 percent of the students polled before the economic downturn have dealt one year or more with entrepreneurship, compared to 27.1 percent of those from the dcs.\(^7\) In addition, the former usually have used more sources of entrepreneurial information (1.9) than the latter (1.5)\(^8\) and comprise with 37.9

---

\(^4\) The existent divergences are statistically most significant ($p \leq .001$).
\(^5\) The existent divergences are statistically significant ($p \leq .05$).
\(^6\) The existent divergences are statistically most significant ($p \leq .001$).
\(^7\) The existent divergences are statistically most significant ($p \leq .001$).
\(^8\) The existent divergences are statistically most significant ($p \leq .001$).
percent to a higher extent leadership experience than the dcs students (28.4 percent). Thus, it is not surprising that the latter strive more for team start-ups (59.4 percent) than the pcs students (58.2 percent). Furthermore, 36.1 percent of the dcs tend to self-employment on sideline basis, compared to 30.6 percent of the pcs, what is in accord with their lower start-up propensities and higher start-up motivation from economic necessity. The pcs students estimate needing 4.8 years of self-employed activity to be established on the market and approximately 191,000 euros as seed capital, whereas the dcs students expect needing 5.1 years and only about 148,000 euros to start up their business. With 64.0
percent students of the pcs are more willing to pay for business start-up consultation, in opposite to 60.5 percent of the dcs students.

### Table 1
Sample Comparison of Start-up Motives

<table>
<thead>
<tr>
<th>Start-up Barrier</th>
<th>Spearman Correlation*</th>
<th>Significance Level $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Way out of unemployment</td>
<td>.108</td>
<td>.000 (*** )</td>
</tr>
<tr>
<td>Income</td>
<td>.003</td>
<td>.882 (ns)</td>
</tr>
<tr>
<td>Self-actualization</td>
<td>-.012</td>
<td>.553 (ns)</td>
</tr>
<tr>
<td>Prestige</td>
<td>.020</td>
<td>.299 (ns)</td>
</tr>
<tr>
<td>High income</td>
<td>-.005</td>
<td>.790 (ns)</td>
</tr>
<tr>
<td>Flexible hours of work</td>
<td>.006</td>
<td>.739 (ns)</td>
</tr>
<tr>
<td>Having power</td>
<td>-.013</td>
<td>.514 (ns)</td>
</tr>
<tr>
<td>Be one’s own boss</td>
<td>-.063</td>
<td>.001 (*** )</td>
</tr>
<tr>
<td>Realize ideas of one’s own</td>
<td>-.027</td>
<td>.160 (ns)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>-.168</td>
<td>.038 (*)</td>
</tr>
</tbody>
</table>

*: pre-crisis sample: 0; during crisis sample: 1.  
ns: not significant at $p > .05$ (not significant).  
*Significant at $p \leq .05$ (very significant).  
**Significant at $p \leq .01$ (very significant).  
***Significant at $p \leq .001$ (most significant).  

Concerning start-up difficulties, the students of both samples evaluate missing equity definitely as most start-up hindering, followed by own financial risk, missing outside capital and missing customer contacts. Considerable differences exist referring low profit and low turnover expectations as well as the cyclical state, whereupon these factors, particularly the latter, are specified obviously as more start-up restricting by the students questioned during the economic crisis—a not surprising result. Further important start-up barriers—approximately with the same intensity in both samples—are extensive official channels, missing start-up partners, fear of failure and missing business ideas. Fewer start-up difficulties are the politico-economic environment, missing entrepreneurial qualifications, know-how deficit and missing courage. However, the former two are stronger pronounced within the dcs. In both samples missing available time and especially support of family and friends are assessed as low start-up difficulties (Figure 3). Table 2 highlights that the six start-up barriers low turnover and low profit, the cyclical state and the politico-economic environment as well as missing entrepreneurial
qualifications and finally missing available time differ in statistically significant magnitudes between the two samples, all of them are more start-up hindering to the dcs students. Therefore, the polled students experience the state of the economic framework obviously to be encumbered as a result of the economic crisis. Moreover, the dcs students seem to lack more entrepreneurship education—a signal that start-up support measures have to be intensified at the universities. In addition, the stronger time deficit of the dcs students lets assume that the new Bachelor study courses neglect stronger start-up-relevant issues during studies.

Figure 3
Start-up Barriers

0: none; 1: smallest; 2: small; 3: fewer; 4: balanced; 5: more; 6: big; 7: biggest

Referring to desired university support, to all questioned students coaching and consulting as well as
Table 2
Sample Comparison of Start-up Barriers

<table>
<thead>
<tr>
<th>Start-up Barrier</th>
<th>Spearman Correlationª</th>
<th>Significance Level $p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing “right” business idea</td>
<td>-.014</td>
<td>.493 (ns)</td>
</tr>
<tr>
<td>Missing “right” start-up partner</td>
<td>.026</td>
<td>.191 (ns)</td>
</tr>
<tr>
<td>Missing entrepreneurial qualification</td>
<td>.061</td>
<td>.003 (**)</td>
</tr>
<tr>
<td>Missing courage</td>
<td>.007</td>
<td>.733 (ns)</td>
</tr>
<tr>
<td>Missing available time</td>
<td>.059</td>
<td>.004 (**)</td>
</tr>
<tr>
<td>Missing customer contacts</td>
<td>.031</td>
<td>.130 (ns)</td>
</tr>
<tr>
<td>Missing equity</td>
<td>.001</td>
<td>.968 (ns)</td>
</tr>
<tr>
<td>Missing outside capital</td>
<td>.013</td>
<td>.509 (ns)</td>
</tr>
<tr>
<td>Know-how deficit</td>
<td>.019</td>
<td>.349 (ns)</td>
</tr>
<tr>
<td>Own financial risk</td>
<td>.020</td>
<td>.330 (ns)</td>
</tr>
<tr>
<td>Low turnover</td>
<td>.076</td>
<td>.000 (***)</td>
</tr>
<tr>
<td>Low profit</td>
<td>.057</td>
<td>.005 (**)</td>
</tr>
<tr>
<td>Support of family and friends</td>
<td>.032</td>
<td>.113 (ns)</td>
</tr>
<tr>
<td>Politico-economic environment</td>
<td>.043</td>
<td>.035 (*)</td>
</tr>
<tr>
<td>Cyclical state</td>
<td>.160</td>
<td>.000 (***)</td>
</tr>
<tr>
<td>Fear of failure</td>
<td>.023</td>
<td>.248 (ns)</td>
</tr>
<tr>
<td>Extensive official channels</td>
<td>.006</td>
<td>.773 (ns)</td>
</tr>
</tbody>
</table>

ª: pre-crisis sample: 0; during crisis sample: 1.
ns: not significant at $p > .05$ (not significant).
*Significant at $p \leq .05$ (very significant).
**Significant at $p \leq .01$ (very significant).
***Significant at $p \leq .001$ (most significant).

courses are the most preferable educational start-up aids. To the pcs students, furthermore, contact bourses with enterprisers comprise an essential support factor, what is considerably more nonrelevant to the dcs students. In times of crises it is not surprising that the surveyed students assume impulsion financings as more important than the pcs students who, however, consider specific contact points as clearly more relevant. The dcs prefer stronger business games than their counterparts who instead favor meetings and discussion with professors and slightly more business plan workshops. To both samples incubators and especially miscellaneous are the most dispensable university support measures, whereupon they are conspicuously more insignificant to the dcs students. Altogether, to the pcs students, entrepreneurship encouragement can be summed up as more important, assumedly due to their higher start-up propensities and start-up interest respectively (Figure 4). Table 3 points out that courses, business games, business plan workshops and miscellaneous differ in statistically significant
Figure 4
Start-up Assistance Requirements

magnitude between the two samples. While the three latter support factors are more crucial to the pcs students, courses are stronger preferred by the dcs students, what shows that the latter first of all need a start-up sensitization and procurement of entrepreneurial basis knowledge that can be attained assumedly best on the basis of entrepreneurship lessons. In contrast, the pcs students with their higher start-up intentions are more intensely ready for entrepreneurial education that should be offered in a later phase of the start-up process.
Table 3
Sample Comparison of Start-up Assistance Requirements

<table>
<thead>
<tr>
<th>Start-up Assistance Requirement</th>
<th>Spearman Correlationª</th>
<th>Significance Level p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td>.038</td>
<td>.049 (*)</td>
</tr>
<tr>
<td>Business game</td>
<td>-.064</td>
<td>.001 (***</td>
</tr>
<tr>
<td>Business plan workshop</td>
<td>-.076</td>
<td>.000 (***</td>
</tr>
<tr>
<td>Contact bourse with enterprisers</td>
<td>-.010</td>
<td>.600 (ns)</td>
</tr>
<tr>
<td>Meetings and discussions with professors</td>
<td>-.011</td>
<td>.568 (ns)</td>
</tr>
<tr>
<td>Coaching and consulting</td>
<td>-.027</td>
<td>.170 (ns)</td>
</tr>
<tr>
<td>Impulsion financing</td>
<td>.003</td>
<td>.882 (ns)</td>
</tr>
<tr>
<td>Specific contact point</td>
<td>.023</td>
<td>.241 (ns)</td>
</tr>
<tr>
<td>Incubator</td>
<td>.031</td>
<td>.151 (ns)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>-.252</td>
<td>.005 (**)</td>
</tr>
</tbody>
</table>

ª: pre-crisis sample: 0; during crisis sample: 1.
ns: not significant at p > .05 (not significant).
*Significant at p ≤ .05 (very significant).
**Significant at p ≤ .01 (very significant).
***Significant at p ≤ .001 (most significant).

Implications

Summarized, the findings show the students surveyed during the economic crisis to represent significant lower start-up propensities and probabilities than the pre-crisis student sample and assume to create an own enterprise later in future. Moreover, the dcs students have collected to a lesser extent entrepreneurship information, have dealt less time with it and have fewer business ideas in mind. In contrast, the dcs students represent remarkably stronger a start-up motivation from economic necessity and value the entrepreneurship climate better than their counterparts from the pre-crisis sample. The polled students experience the state of the economic framework obviously to be encumbered by the economic crisis. In addition, the dcs students lack more entrepreneurship education—a signal that start-up support measures have to be intensified at the universities—and estimate a stronger time deficit. Hence, it can be assumed that and should be checked if the new Bachelor courses have integrated less start-up-relevant issues into their study modules. This could be reflected in the conspicuously higher fraction of foundation-laymen in the dcs. Based on their desired university support, it can be concluded that the dcs students first of all need a start-up sensitization and procurement of entrepreneurial basis
knowledge that can be attained assumedly best on the basis of entrepreneurship lessons.

Taken as a whole, the students questioned during the economic crisis seem to be less prepared for their potential self-employment during and after their studies respectively. Admittedly, while interpreting these findings some sample differences have to be considered—for instance the age and semester differences as well as the fractions of postgraduates. However, from the results it can be concluded that the universities have to impart more intensely—in a stepwise and procedural manner—general entrepreneurial competencies to the students within their studies so that they are able to mature as potential entrepreneurs during their educational process. Given that more than 55 percent of the dcs students are *foundation-laymen*—that is persons who have dealt with business venturing not at all and, thus, are not opposed to their potential entrepreneurial activity—one has to take advantage of the option to stimulate students with all start-up ambition values to entrepreneurship. All students should consider their universites—the place where they are prepared for professionalism—as competence centers and contact points regarding dependent work as well as self-employment.

Assuming a positive start-up climate does de facto not mean having a strongly pronounced entrepreneurial intention. In this connection, the students surveyed during the crisis indeed represent—coinciding with the literarily assumptions—a stronger necessity-driven start-up motivation but tend to a lower extent to autonomy—a not positive signal for attaining more student opportunity entrepreneurship with its beneficial effect on economic development. Therefore, the universities are postulated to support the necessary advance of their students’ and graduates’ start-up motivation from economic self-actualization with an adequate conception of entrepreneurship programs that has to be derived from further knowledge about an appropriate assistance of student business start-ups within the scope of a global economic crisis that shifts unemployed to self-employed work—a fundamental reason for the governments to enact purposive prerequisites for the arrangement and establishment of a start-up-supportive entrepreneurial culture at universities. Hereby, students could be qualified and enabled
better to develop entrepreneurial understandings and competencies in order to be already during their
studies sensitized for the recognition of entrepreneurial opportunities and also willing to realize them
eventually.

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The Frames of Interpretation in Biotechnology New Venture Creation

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Abstract

The purpose of this study is to explore the unlike frames of interpretation present at university spin-off creation. The article asks: What are the unlike frames of interpretation in university spin-off creation and how do they affect the creation process? The findings of this research show that in university spin-off creation there are a multiplicity of frames of interpretation present and that they are engaged in a very complex and multilayered interplay. These multiple frames of interpretation pose a serious challenge to a successful spin-off creation by producing systematic misunderstanding.

Keywords: biotechnology, new venture, spin-off, frame of interpretation

Introduction

Commercialization of technology developed in academic institutions has been widely regarded as important considering the regional economic development, employment creation and the creation of new knowledge. Hence, the process of university spin-off creation has attracted increasing interest of researchers as well as policy makers (Djockovic & Souitaris 2008, Wright et al. 2007). Consequently, governments and universities have established policies and support systems to promote the commercialization of university research. However, in Europe, the question remains that in spite of increasing patenting activity, why has the rate of new company formation in bio-
technology been steadily declining throughout this decade in Europe and the USA (Critical I)? To reap the promises and possibilities of biotechnology it is important to explore the challenges and obstacles in new venture creation and especially in the early development phase.

Prior research in the area focuses mainly on governments and universities as well as the preferred support mechanisms and policies to enhance university spin-off creation (Djockovic & Souitaris 2008). Despite the commonly recognized importance of the entrepreneurial team in new venture creation, the research focusing on the spin-off process at team or company levels is very scarce (Clarysse & Moray 2004, Djockovic & Souitaris 2008). This narrow stream of research on the company level has adopted a view that spin-offs have excellent scientific capabilities and knowledge, but they generally lack basic business skills, capabilities and experience (Vohora et al. 2004, Hermans, Kulvik & Tahvanainen 2004). To gain complementary capabilities and resources, the spin-offs collaborate with partners such as university technology transfer offices and governmental commercialization programs (Debackere & Veugelers 2005, Siegel et al. 2003). While previous research has examined the issue from the resources and capabilities (Clarysse & Moray 2004), entrepreneurial orientation (Roberts 1991) and relationship point of view (Perez & Sanchez 2003), this paper adds another approach, a cultural approach and frame analysis, to the study of spin-off processes.

This approach is a response to the recent increasing attention for research that would rather acknowledge the societal contexts that organizations operate in and the need for research strategies that would capture the role of societal culture in organizations (Creed at al. 2002). This article argues that the cultural contexts and more specifically the different frames of interpretation (Geertz 1973) present challenges worthy of study in spin-off creation processes. There is evidence that the conflicting objectives of academics, venture capitalists, stakeholders and the management team may adversely affect the business (West & Noel 2009, Vohora et al. 2004). This is no surprise as it is
well documented that people from different thought worlds use different meanings in their functional setting and cannot easily share ideas or may ignore one another’s central ideas or reject them outright (Dougherty 1992). In spite of that, the research on university spin-offs has largely ignored this view. The purpose of this study is to explore the unlike frames of interpretation present at university spin-off creation. The article asks: What are the unlike frames of interpretation in university spin-off creation and how do they affect the creation process?

**Theoretical Background**

The purpose of this paper is to explore the frames of interpretation present at science-based university spin-off creation in the field of biotechnology. This is an especially suitable context for studying university spin-offs as the industry has originally emerged at the intersection of scientific interest and commercial potential (Powell & Owen-Smith 1998), the science-commerce linkage has remained as a special characteristic of the industry (Stokes 1998, Zhang 2009) and because the industry has since its emergence continuously relied on scientific innovation (Zhang 2009). In addition, biotechnology has been considered to be the most promising technological frontier for the coming decades. The biotechnology industry is made up of companies which apply biotechnology techniques to produce goods and services as well as companies which employ the technologies, applications and products concerning industries such as health care, pharmaceuticals, environmental protection, agriculture, food production and industrial chemicals (Hall & Bagchi-Sen 2007, Pisano 2006, Hine & Kapeleris 2006, Rader 2005). Affecting such great variety of industries and areas of living, the biotechnological applications are expected to revolutionize the lives of individual people and influence whole economies and ecosystems.
The previous research on university spin-offs has mainly focused on the policy and support mechanisms as well as on the role on universities in the new venture creation process. In addition, the research has touched upon the relationship between USO, industry and university. However, there is surprisingly little research on the level of the entrepreneurial team and how it evolves into an established business (Clarysse & Moray 2004, Djockovic & Souitaris 2008). Still, a few challenges have been identified in recent literature. Firstly, spin-off companies lack market-oriented focus and therefore face a challenge to transform the initial idea, evolved in a non-commercial environment, into an established profitable firm that is oriented towards the markets (Hermans et al. 2004, Radosevic 1993). The founder can myopically focus on science and disregard any recommendations of the managers intended to help to run the business (West & Noel 2009). The scientists’ entrepreneurial motivation can be low and they are thus reluctant to leave their positions in academia. Instead, they would rather be part-time entrepreneurs, which evidently affects the development of the company (Fontes 2001, Roberts & Malone 1996, Roberts 1991). There is evidence that university spin-offs have difficulties accessing capital and other critical assets such as manufacturing competencies and distribution channels (Fontes 2001).

The biggest challenge for any new venture is to transform the founder’s personal knowledge or idea into a crystallized idea of the business opportunity (Brush et al. 2001, West & Noel 2009). In biotechnology this might be more difficult than on the average. What comes to science-based businesses, the diversity of the social worlds of scientists and business practitioners raises significant challenges for translating the knowledge from the basic science into new technological innovations. Traditionally there has been a contrasting difference between knowledge produced for fundamental scientific interest and knowledge produced primarily for commercial gain (Powell & Owen-Smith 1998). Knowledge production in Pasteur’s quadrant i.e. at the intersection of scientific achievement and commercial potential is essentially a characteristic of biotechnology business
Before the emergence of biotechnology business, science and business operated in separate spheres.

Working in Pasteur’s quadrant, where scientific and commercial opportunities converge, involves several conflicts. Consequently, there is evidence that the conflicting objectives of academics, venture capitalists, stakeholders and the management team may adversely affect the business (Vohora et al. 2004). In general, it is well documented that people from different thought worlds use different meanings in their functional setting and cannot easily share ideas or may ignore one another’s central ideas or reject them outright (Dougherty 1992). One reason for this, which has not been considered in recent literature on new ventures, may be that actors from different cultural contexts are using different frames of interpretation. These frames guide the actors’ attention and thus determine what aspects they consider noticeable or meaningful. Accordingly, while frames call attention to some aspects of reality, they disregard other elements as being not significant (Entman 1993, Benford & Snow 2000).

Framing is an activity of sorting out elements of social experience and shared construction of meaning in a certain situation. The origin of frame analysis is primarily in the work of Goffman (1974) who regards framing as a “day-to-day sense-making technique” (Creed at al. 2002). Framing refers to a process where actors collectively negotiate and construct meanings. Framing in nature is an active and dynamic reality construction process. As a result of the framing process, the actors generate shared interpretive frames (Benford & Snow 2000).

Frames can be described to act in social life like the default values in a computer (Agar 1994). For example, the default size of a Microsoft Office Word page in the USA is “letter” and in Europe it is “A4”. Frames operate as default values and organize the expectations of an actor. When
he uses a computer in Europe, he expects the page format to be A4. In daily interactions the frames organize our expectations i.e. what we expect that should be going on in a situation and how we are expected to act (Benford & Snow 2000). It can happen that there seems to be something wrong in the situation. That is when the default values do not work and the actor needs to decide whether he is using a wrong frame or if the frame needs to be changed (Agar 1994). Thus, frames “render events and occurrences meaningful and thereby function to organize experience and guide action” (Benford & Snow 2000).

Another metaphor illustrating the frames of interpretation are “picture frames” or “window frames” to highlight the issue that frames direct our attention into some aspects and at the same time limit our view to only a part of the complex world around us (Creed et al. 2002). A frame defines a boundary around the details and guides which events are more relevant to an issue or situation. These events or occurrences, highlighted by a frame, are perceived more noticeable and meaningful than others (Agar 1994, Entman 1993, Benford & Snow 2000). Like a window, we see the world through frames that determine our perspective while limiting our view to only a part of the complex world around us.

A third metaphor to illustrate the nature of a frame is a “frame of a house” or “a skeleton” (Creed et al. 2002). The idea is that the frame acts as a structure that holds a set of idea elements, beliefs and meanings together (Benford & Snow 2000) and highlights how those beliefs and meanings are related to each other (Agar 1994). In this way frames simplify the sense-making of everyday life enabling individuals “to locate, perceive, identify, and label” (Goffman 1974, 21) the mundane occurrences. According to Creed et al. (2002) “the goal of frame analysis is understanding how certain idea elements are linked together into packages of meaning, potentially encoded into
soundbite-like signifiers that stand for those packages of meaning, and deployed in situated discursive activity.”

Frame analysis has been mainly used in the study of social movements and policy debates. However, it offers fruitful applications in organizational research as well (Creed et al. 2002). It offers several aspects that are missing in the recent studies of university spin-off creation. Firstly, the frame analysis adds a cultural layer to the body of research in this area as culture can be regarded as a stock of commonly invoked frames (Entman 1993). Secondly, frame analysis enables the capturing of the role of social context rather than treating topics as stand-alone managerial problems (Creed et al. 2002).

**Methodology**

This research builds on the results of an 18-month empirical study focusing on the creation of a university spin-off company in the field of biotechnology. The observed team consisted of a university professor and some members of his research group at the pharmaceutical chemistry department, a university technology transfer officer and a business researcher who acted in the project as a commercial advisor. Hence, in the study, the author acted as an insider participant observer and actively engaged in negotiating the shared understanding of the business opportunity. The collected field notes consist of transcriptions of informal discussions. Telephone discussions have been transcribed as accurately as possible after every call. Also, the contents of personal one-on-one discussions have been transcribed as accurately as possible after every encounter. Skype chats and e-mails were saved as text files.
This study explores university spin-off creation from a cultural perspective. Following Geertz (1973) and Smircich (1983), culture is considered in this study as a network of meanings that provide its members a shared and accepted reality. A frame is a basic structure that holds a set of meanings together. The basic proposition in this paper is that the challenges of university spin-off creation are rooted in the different frames of interpretation. According to Agar (1994) “a mistake means that other frames are operating, frames you aren’t using, frames you may never have imagined existed.” The analysis in this paper starts by identifying those “rich points” where mistakes happen or things are not working as they are supposed to. Hence, the analysis was started by reading the notes line by line and encoding the incidents of mistakes.

At the next stage of the analysis the mistake incidents were taken into closer examination. Creed et al. (2002) presented a suitable way to perform frame analysis in organization studies which was adopted in this study as well. Elements of punctuating, elaborating and motivating functions were sorted out into a matrix. These elements act as established codes. When a person familiar to that frame comes across any of these elements, they act as a code telling that this certain frame is applicable in this situation. It is important to note that a single element can be attached to several frames but it can have a different meaning in each frame. It is important to sort out why a single element is meaningful in that certain frame.

In the following, I describe one situation to illustrate what sorts of frames there can be present at the new venture creation and how they affect the process.
I am sitting in the professor’s small office room with him and a researcher. We have just completed writing the business plan and discuss about starting the business. I say “I think that what we need first are customers. If we could get even one customer, we would not need that capital to start the business.” The professor is feeling seemingly uneasy and frustrated. He is nodding his head and raises his palms at me as if he was about to surrender and give in to what appears to seem to him like my personal fixation about customers. “Yes, yes, yes. We need customers, but what we need right now is money. This molecule... what I need is 10 000 € to patent it for this company.” They have told me all about those molecules that have been patented by the university, which does not have money to support all its patents anymore. “So we could get those very cheap. I think it would be a good business idea”, the Professor explained. Because of my training and working experience with SME companies I instantly felt in my guts that it was a dead wrong idea. It would be against the basic rules I have internalized: crystallize your business idea, focus on your core business etc. The idea of this company is to provide hit-to-lead services to other companies, not to develop own leads or candidates. And if we develop our own candidates it would create a conflict of interest with our customers. In my everyday business life these are self-evident things that do not need to be discussed. I was extremely uncertain how should I explain it to the professor and the other scientists. It was like suddenly you would be asked to prove that world is round. I told him what our mentor, provided by the government Funding Agency for Technology and Innovation, had told me: “There are investors interested to invest in service companies and there are other investors interested investing in companies with IPR, mixing those two could cause that none of the investors would give us money. So we agreed not to patent any own molecules. We have agreed on that several times. Now that patenting again is brought up, I am getting a feeling that there is some invisible barrier which prevents us from connecting.
Later I will find out that I am wrong. The university basically demands that the company takes some of its patents for development in exchange for the permission to spin-off. In addition, we will learn that if we want to get money to start the business, the company needs a convincing set of IPR. Luckily we have an opportunity to patent some very promising molecules. It does not seem to bother anyone else but me that those patents have absolutely nothing to do with the business idea of the company.

Our meeting continues and the researcher tries to clarify my earlier point about getting customers: “But if we sell something we get money.” The professor turns to me like I was a child who is whining for a new toy and soothingly says: “Heidi, you can sell something if you want to. I will come and help you any time you need. I even buy the airline tickets with my own money and come with you...” To me it is such an incomprehensible idea that I get speechless. How could I possibly sell these services if I barely understand the science behind our service packages! Later our mentor would also suggest a similar idea that I would “be in charge of the Nordic countries and northern Europe.” And I still would not understand how I could do it. The thing that bothers me even more is that the professor seems to think that selling is something I want to do because I like it, but it really is just something that has to be done to get customers and turnover. With my entrepreneur friends we call it “shoveling-work” referring to a kind of shoveling you would do in a barn.

I am not giving up with this issue about customers. To get the business up and running we either need small outside investment or one customer agreement. I have seen the lists of all funding raised by the professor and his team and I know that they are successfully used to seek funding from various sources. So they might consider it easier to seek investors to this business. On the other hand, I am used to new customer acquisition so I think that an easier way would be to get one cus-
tomer. The scientists have showed me lists of rather impressive company agreements that the professor has arranged for the department. I remind “didn’t you already have agreements you can just transfer to this company?” This issue has been already discussed with the university Technology Transfer Office as well. The researcher mentions a contract with one company that is under negotiations right now. They engage in a heated conversation about a molecule that the company is developing. They talk about such specific chemistry that I do not understand a word they are saying. From their body language I interpret that for some reason they resent that company and what they are doing. The professor concludes the discussion: “They are such vicious snakes that I don’t want to have anything to do with them. I really do not like how they do business.”
Results

Even from this very short incident several frames of interpretation can be sorted out. Those frames are summarized in Table 1.

<table>
<thead>
<tr>
<th>Model</th>
<th>Science frame</th>
<th>Generic business frame</th>
<th>Survival frame</th>
<th>Opportunistic frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punctuation: What is the problem?</td>
<td>University is about to sell out patents that are based on our discoveries. It would mean that we can no longer develop them further.</td>
<td>We have a good business idea but need some solution for the company to survive the first year.</td>
<td>University has patents it no longer can support. It needs an easy way to cash them out.</td>
<td>There is an opportunity to acquire promising but cheap patents, develop them and collect the revenue. How to utilize this opportunity?</td>
</tr>
<tr>
<td>Elaboration: Who is responsible? What outcomes can be projected with or without interventions?</td>
<td>We need some way to retain the possibility to develop the molecules further. Founding a company is a way to buy the patents to ourselves.</td>
<td>We need to get the business up and running as fast as possible. The sooner the company is able to generate turnover the shorter the time in the death valley would be.</td>
<td>Technology transfer office who governs the patents also governs the permissions to spin-off. Solution is to have the scientists who are founding companies to buy the patents that are based on their own work.</td>
<td>Best way to profit is to found a company with a business idea that somehow includes these patents.</td>
</tr>
<tr>
<td>Motivation: What action should be taken?</td>
<td>We need to raise money to buy the patents and to cover the operating costs of our laboratories.</td>
<td>We need to acquire customers as soon as possible.</td>
<td>Support the spin-off creation and demand that every spin-off buys some patents.</td>
<td>We need to create convincing pitches for investors to raise money for the development work.</td>
</tr>
</tbody>
</table>

Table 1: The frames of interpretation

The purpose of this sorting is not to comprehensively describe each frame of interpretation. On the contrary, the aim here is to show that there are several different frames of interpretation and the general business frame. Their simultaneous presence in a situation causes mistakes, misunderstanding and difficulties as in the earlier description. For example, the concept of “customer” is
relevant only in the general business frame and therefore it makes sense how the actors sponsoring
some other frames would ignore the issues regarding customers and turnover generation. Another
example is the concept of “business idea” that means very different things in each frame of interpre-
tation. Accordingly, founding a company serves very different kinds of goals in each frame. In the
science frame, the company is a means to continue the scientific work. In the survival frame, the
spin-offs are a convenient way to the university to cash off their patents. And at the same time, an
actor sponsoring the general business frame considers having a great business idea and aims to get
the business up and running as fast as possible.

Conclusions

Firstly, this research makes a contribution to the research on science-based business by
showing that the widely accepted statement - that the challenges of especially biotechnology are
rooted in the conflict between scientific interest and commercial gain (Powell & Owen-Smith,
Stokes 1998) - is too simplistic. The findings of this research show that in university spin-off crea-
tion there are a multiplicity of frames of interpretation present and that they are engaged in a very
complex and multilayered interplay.

Secondly, this research makes a contribution to the research on university spin-off process
by showing how the multiple frames of interpretation pose a serious challenge to a successful spin-
off creation by producing systematic misunderstanding. In addition, the research shows that the
difficulties in the spin-off creation are not caused by the scientists being lacking or incompetent.
Instead, the mistakes and confusion occur because “other frames are operating, frames you aren’t
using; frames you may never have imagined existed” (Agar 2002, 243).
Thirdly, this research also makes a methodological contribution by showing that the cultural approach and frame analysis to university spin-off research holds a great promise to explain phenomena that may be difficult to grasp for the traditional approaches is this research area. An important aspect for further research is to take into account the notion that a large part of new venture creation is done in some other frame than in the generic business frame. Therefore, the research that considers only the generic business frame will produce a very incomplete and possibly incomprehensible picture of the phenomenon.
References:


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2. Summary

In development of the underlying research project, the research team on family owned business detected the convenience for exploration—and initial validation—of the process for Planning of Generational Takeover in Family Owned business, as a factor of unique pertinence for the stability of Corporate Governance and Perdurability of Family Owned Business.

Noteworthy is the fact that such exploration of the process for Generational Take-over constitutes a fundamental step for purposes of research conducted on the impact of Family Protocols on Corporate Governance of companies of family profile, given the fact that initial findings, as presented herein, provide evidence on trends for management of family owned business, organizations that are commonly characterized by very high levels of informality in their inner administration and governance procedures.
3. Key Words

Family Owned Business, Generational Takeover, Succession, Corporate Governance, Perdurability, Planning.

4. Introduction

Succession in Management of a family business is nowadays one of the aspects calling for greater attention as a component of factors for success or failure of Family Owned Business Worldwide. This fact is hereinafter in the section of Theoretical Framework for the present research. Investigators Guinjoan and Llaurado (2000), are of the opinion that “Planning of the succession adds to the possibility of survival of a family business, to the extent that the Succession Plan is an exercise on the anticipation of future events of personal, family and corporate nature, oriented to exert influence over such events and shape them according to certain pre-established interests.” These authors underline two key factors for the success in the transmission of command in the management of Family Owned Business. These factors are: (one) That whoever is to surrender control of company management is cognizant of the need for the anticipated preparation of the transmission; and (two) That the successor is well informed of the structure of the company.

The above, also, when facing the reality that the great challenges of the processes of generational switch in family owned business are universally recognized. It is so that from each new 100 family business created, only 30
survive the change from the first to the second generation and only 13 reach the stage of being managed by the grandchildren of the founders.

In our environment, studies on the problematic of succession in the management of family owned business are rather precarious. In this regard, we must mention the findings of the Research Group on Family Owned Business of the School of Business Administration of Universidad Externado de Colombia (2002-2003), in which, out of a sample of 400 “Pymes” (small and medium size companies – as per Spanish initials) only 13 percent of them have declared to have an agreement for the management of the family business, commonly denominated a “Family Protocol”, which usually conveys the agreement reached by the owner family for the process of generational takeover as a mechanisms to provide stability and perdurability to the family company.

Aiming to achieve domestic validation of universal trends regarding succession in the management of family owned business, the Research Group on Family Owned Business of Universidad Externado de Colombia structured a tool for exploration of Generational Takeover processes, with some 138 Colombian organizations of family profile, as a first approach.

It is important to mention that such exploration of Generational Takeover processes does constitute a fundamental step for purposes of research of the impact of Family Protocols on the Corporate Governance of Companies with family profile, given the fact that initial findings, as presented herein, provide evidence on tendencies in Management of family owned business,
organizations that are often characterized by high levels of informality in their administration and governance.

The purpose of this investigation is to achieve findings of interest for those members of family owned businesses that have been, are or will be involved in processes of Generational Takeover, as well as for those who act as counselors in such processes.

The conclusions we expect to reach after culmination of this research shall constitute a reference framework of sound practices by those companies that have successfully completed a succession experience and a guide for those companies in the midst of or in course of involvement in a similar process in the short run.

Likewise, it will be the best way in which to establish contrast with the Succession Theory nowadays known worldwide and to determine the level of its applicability to Colombian enterprises, supporting them if such were the case, or to complement them if resulting in different value added from entrepreneurs and companies interviewed.

The underlying work has implied the establishment of direct contact with members of the first and second generation and, in some instances, with other members of the entrepreneurial family or organization who play a preponderant role in the process.
5.1 Theoretical Framework on Generational Succession and Takeover

Fred Neubauer and Alden G. Lank, mention, in already a classic work “The Family Business” (1999), - that the succession of the manager of family companies is one of the most studied and analyzed aspects and also one of the most relevant determinants, if not the most important, for company to remain – or not-in the hands of the founder family. These authors assert that professors, investigators, advisors and members of the entrepreneurial families assign to succession the first place in the level of importance of the planning role of organization with family profile.

Other authors such as Gersick, Davis and Lansberg, (1997) - state that, in family owned business, the matter of succession is a process of transition along the dimension of the property, the family and the company itself and outline that, for this process to be successful, the entrepreneurial family must examine, align and disclose its shared dreams and, from such dreams, create a coherent dream for the family company.

Peter Leach (1996), - comments that Generational transition involves challenge above other types of defiance regarding perdurability of the organizations, to the extent that “the founder of the company must stand up to strong psychological barriers pursuant to planning his/her retirement”…. , and underlines factors such as fear to surrender control and power, loss of its own identity, incapability to choose between the children, uncertainty as to its own retirement, and jealousy and rivalries within the entrepreneurial family.
In the vision of *Craig E. Aronof and John Ward (1999)*, the success of the process for generational transition lies, in high proportion, on the continued learning process of the successor and its good coordination with whom is surrendering the “Command Stick”, as a complement of a policy of assimilation of corporate strategies, history and family culture.

The conceptual framework of this investigation may then be stated under three main elements – that we deem to be vital at the instance of studying Succession as a complex event, and that approach all main aspects related to the process; these elements are:

**5.1.1. Preparation of the Predecessor or Founder**

One of the main reasons for which a successful takeover is often not achieved is the lack of preparation for retirement of the founder of the family business. This is caused by different motives amongst which we may include financial security plans for the retiree, referent to secure economic means available to the person at the moment of departure from company’s management. We also find, most frequently, lack of planning for the succession in terms of family wealth when successors take over the family business and there are no clear policies in this area. In addition to the above, the founder of the company many times tries to hang on to the position in fear of departing from a routine or by reason of not finding an interesting alternate activity in which to invest available time.
5.1.2. Preparation of Successors

Another most common problem amongst those that come up at the time of facing the process of generational switch is the lack of preparation of the Successor. Authors such as Ward and Aronoff (1992) recommend to start by transmitting to the elected Successor (whether within the family or outside) the values of the family and organization since these are the basis for continuity of the company. In a similar manner, authors Leach (1996), Neubauer and Lamk (1999), and Gersick, Davis and Ivan Lansberg (1997), suggest that family must endeavor to provide the elected successor with an adequate formation, enabling facing of the new challenges that the process will bring up as well as to favor acquiring prior experience inside of the family business or, even better, outside the company. The same authors indicate that, in the event the Successor does not have the ideal skills and competences for takeover of the underlying responsibility with total professional suitability, or maybe when not of an age adequate for accepting control of the organization, it is feasible to think of someone outsider the entrepreneurial family as possible successor, provided that the very family verifies fulfillment of a series of personal and professional attributes that may be specified in the Family Protocol.

5.1.3. Preparation of Partners and Shareholders

Of one most latent fears in processes of Generational Transition is that of surrendering “when alive” a significant participation in the property to the
successor or successors. For this purpose, the above mentioned authors state that it is necessary to engage in the previous preparation and education of a team of responsible partners and/or shareholders who are in capacity to answer to both the family and the company.

It is our posture that, in the Colombian case, succession in family owned companies in this country, must be converted into one of the most relevant fields of investigation as a result of the significant incidence born by a planned process of secession over the continuity and perdurability of organizations with family profile. It is so that statistics mentioned by relevant authors such as John Ward, (2006), from 100 percent of family owned companies created throughout the World, approximately 30 percent survives the second generation. This is the same situation of third generation family companies; that is, those controlled by the grandchildren of the founders, who represent a low 13 percent of initially created family owned companies.

A research study prepared in Colombia by Andres Gaitan Rozo and Jose Danilo Castro on family companies (Superintendence of Corporations – 2001) underlines that the principal factor of mortality of this type of companies is the aspect of Succession in the management of the company. Effectively, said investigation determined that only 12 percent of the individuals interviewed had included in their companies aspects such as planning of generational takeover, out of all individuals interviewed as components of the universal sample for the referred investigation.
According to this same study, there is an aggravating factor that turns the challenge of succession an even more complex aspect. In effect, the authors of this study mention that approximately 75 percent of family companies that integrate the productive sector of the country were created in the 1970s; that is to say, most probably the largest majority of the surviving companies still operational is currently facing the time for succession or will be facing it within a short period of time. This reality allows us to infer that a large portion of the companies in the country (large companies, PYMES and micro-companies) face the risk of non survival of Generational Takeover, which could cause some sort of negative impact over the performance of economic variables such as employment and the dynamics of Gross Domestic Product (GDP) growth, amongst other.

5.2. Methodology of Research

The present investigation on local trends in the planning of succession in Family Owned Business has been conducted with the cooperation of companies in the different sectors of the economy and in different scales of the corporate sector (large, (PYMES) and micro-companies), focusing attention on the behavior of each company regarding aspects related to the planning process to be engaged by any family company in order to accomplish a successful transition and generational takeover, the latter understood as an organized and planned process that positively contributes to the perdurability of the family company, and to the harmonic relationships that must prevail between all members of the family society.
Once the Investigation Group on Family Owned Business adopted a position regarding the importance of a prior exploration of trends in the planning of generational transition in family companies in our own environment, next step was to initiate identification, on the basis of studies, bibliographic review of the topic, International polls (London Business School, Fundacion Nexia and the Course on family Companies at IESE Business School), amongst other sources, of the most relevant factors for analysis as components of the processes for Planning of Generational Succession, and ending with the design of a 29 question instrument, The Survey, that would allow inquiries over the following aspects:

- Company Profile
- Profile of the Interviewed (the entrepreneur)
- Generational Takeover of the family company
- Planning of preparation of the managing predecessor
- Planning of preparation of Management Successors
- Partners and Shareholders

On the other hand, coherent with the policies of the School of Business Administration of Universidad Externado de Colombia, meaning to involve students, teaching staff and entrepreneurs, pertinent training was given to 190 ninth-semester undergraduate students, groups 009C and 009D, who took the course denominated “Emphasis on Management of Family Companies” during the first and second semester of 2008 and the first and second semester of
2009, in the fundamental concepts and problematic of governance and administration of companies with family profile, seeking to interview and question each manager of the 190 family owned companies previously endorsed by the teaching staff. Needless to say, this methodology included personal presentation, by each student, of the result of its own investigation, to the teaching staff including analysis and interpretation, an exercise that constituted the final paper for the course.

Information included in the survey was then processed for interpretation of answers, becoming the support of preliminary findings of the investigation, as will be commented hereinafter.

5.3. Working Hypothesis

The working hypothesis support of this investigation is described in the following terms:

“Pursuant to strategies for perdurability, Colombia family Owned Business evidence tendency not to plan the Generational Takeover process”.

5.4. Findings from the Investigation

Below please find most relevant findings from this investigation.

5.4.1. Company Profile
5.4.1.1. Activity Profile

It was possible to determine that a large portion of companies in the sample under analysis are concentrated in the development of production of goods (79 companies), followed by production of services (68 companies) and – at the same level- distribution of services (68 companies).

5.4.1.2. Economic Sector

It was found that the industrial sector, with 59 companies, is the leading sector when compared to other sectors included in the sample. Second place is that of services with 56 companies.

5.4.1.3. Number of Employees in Family Owned Business
The sample allowed determination that most part of the companies has between one and ten employees, accounting for 42 percent, and a second group representing 20 percent, employs between 21 and 50 persons.

5.4.1.4. Asset Size

A sound 42.1 percent of the sample corresponds to small companies, falling well under the definition of the Law SMBEs (small and medium size companies), with total assets between two hundred and thirty one million Colombian pesos (Col$231MM) and two thousand three hundred and seven million pesos (Col $ 2,307 MM).

5.4.2. Profile of the Interviewed (Entrepreneur)

Chart No. 2 - Profile of the Interviewed (entrepreneur)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>22-25</td>
<td>26-30</td>
<td>31-40</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>3.2%</td>
<td>3.7%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

Source: Authors of the Investigation

5.4.2.1. Average Age of the Manager of the Family Owned Business

Most common age range of the managers interviewed is 51 – 69 years, accounting for 36.8 percent of the sample.
5.4.2.2. Position Within the Family

It may be concluded that first generation individuals –father and/or mother- accounting for some 70 percent, approximately, are the leading managers of the family company.

5.4.2.3. Other Relevant Aspects

In the sample under consideration it was found that 80.5 percent of individuals in control of company management hold a stable spouse. In a similar manner, it was possible to establish that 35.78 percent of entrepreneurs in the sample have, as an average, two children. On the other hand, it was detected that 16.84 percent of the sample has two siblings.

5.4.3. Generational Takeover of the Family Owned Business

Chart No. 3 – Generational Takeover

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>YES NO YES NO YES NO OUT IN NO ANSWER 1 2 3 4 5 YES NO YES NO OUT IN NO ANSWER 1 2 3 4 5</td>
<td>YES NO YES NO OUT IN NO</td>
<td>YES NO YES NO</td>
<td>YES NO</td>
<td>OUT IN NO</td>
<td>YES NO</td>
</tr>
<tr>
<td>133 57</td>
<td>40 150</td>
<td>104 86</td>
<td>23 166</td>
<td>1</td>
<td>103 69</td>
</tr>
<tr>
<td>76.0% 50.0%</td>
<td>21.7% 78.3%</td>
<td>54.7% 45.3%</td>
<td>12.1% 47.4%</td>
<td>0.5% 99.5%</td>
<td>54.2% 45.8%</td>
</tr>
</tbody>
</table>

Source: Authors of the Investigation

5.4.3.1. Companies that Consider Generational Takeover / Established Strategies
A high 70 percent of companies included in the survey do consider generational takeover a matter of importance but have not implemented clear strategies for the underlying generational transition process, as revealed by 78.9 percent of the sample.

### 5.4.3.2. Identification of a Successor for Management of the Company (within internal or external)

From the sample under analysis, some 54.7 percent has clearly identified a successor for management of the family company upon decision to retire by predecessor. 87.4 percent of the companies contemplate succession by a member of the entrepreneurial family.

### 5.4.3.3. Relevant Aspects for Definition of a Successor

Current manager does consider that relevant attributes for election of a successor include – in this order: experience in the family company, high level education and experience in companies outsider family company.

### 5.4.3.4. Mechanisms for Selection of a Successor

Those currently holding the management position indicated to prefer (46.3 percent) reaching family consensus for selection of the successor, while
32.6 percent prefer to reach a consensus between family members, the board of directors and key managers in the organization.

5.4.4. Planning of Preparation of the Management Predecessor

Chart No. 4 – Preparation of the Management Predecessor

<table>
<thead>
<tr>
<th>Preparations</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Preparation</td>
<td>139</td>
<td>51</td>
</tr>
<tr>
<td>Retirement Planning</td>
<td>16.</td>
<td>17.</td>
</tr>
<tr>
<td>Timing Defined for Retirement from Company Management</td>
<td>35</td>
<td>155</td>
</tr>
<tr>
<td>Has Considered Post-Retirement Business or Personal Project</td>
<td>99</td>
<td>91</td>
</tr>
<tr>
<td>Willing to Let Other Assume Family Company Risks</td>
<td>148</td>
<td>42</td>
</tr>
<tr>
<td>Comfortable with Leadership Style of Successor</td>
<td>123</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: Authors of the Investigation

5.4.4.1. Financial Preparation of the Predecessor and Timing of Retirement

Outcome of the survey yields evidence that 73.2 percent of current managers of family owned business surveyed are in process of financial preparation for retirement. Regarding timing for retirement, 81.6 percent has not yet decided on the moment to do so.

5.4.4.2. Prospective Projects of the Predecessor - After Retirement

52.1 percent of managers surveyed states to have a project for new activity (entrepreneurial or personal) to be pursued after retirement from the company.

5.4.4.3. Acceptance by Predecessor of Corporate Risk Management by Successor
Most individuals interviewed, 77.9 percent, accept that the Successor will assume risks for preservation of the entrepreneurial efforts of the family.

5.4.4.4. Acceptance of Leadership Style of the Successor

Surveyed entrepreneurs - 64.7 percent of the sample, expressed to feel comfortable with a new leadership style by their Successor, accepting new criteria and policies for Management of the company.

5.4.5. Planning of Preparation for Management Successors

<table>
<thead>
<tr>
<th>Chart No. 5 – Preparation of Successors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREPARATION OF SUCCESSORS</strong></td>
</tr>
<tr>
<td>21. SUCCESSOR WITH EXPERIENCE OUTSIDE COMPANY</td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td>48</td>
</tr>
<tr>
<td>25.3%</td>
</tr>
</tbody>
</table>

Source: Authors of the Investigation

5.4.5.1. Successor’s Experience Acquired Outsider the Family Owned Business

In this sense, 74.7 percent of managers surveyed expressed concern for the lack of significant and sufficient working experience of the Successor outsider the family business, for suitable assumption of responsibilities in the management of the organization.
5.4.5.2. Planning of the Professional Development of the Successor

Regarding this aspect, most family owned companies do not have concrete plans for the professional development of that warrant professional training and growth of management successors; 65.8 percent of the sample, as depicted by the survey.

5.4.5.3. Professional Competences and Skills of the Successor

It is most interesting to outline that 68.9 percent of surveyed entrepreneurs relieve their successor does indeed have professional competences and skills necessary for due assumption of the responsibilities inherent to the position of the senior executive of the organization.

Nevertheless, and despite the above, they accept that their successors yet lack sufficient experience for sound performance in their Management functions.

5.4.5.4. Transmission of Policies and Strategies from the Current Leader to the Successors

Some 46.8 percent of entrepreneurs surveyed accepted the fact that they do not engage in activities geared to the adequate transmission of company policies and strategies to their successors.
5.4.6. Partners and Shareholders

Chart No. 6 – Partners and Shareholders

<table>
<thead>
<tr>
<th>Shareholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>25. NUMBER OF INDIVIDUAL FAMILY MEMBERS &amp; OWNERS OF FAMILY COMPANY</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>132</td>
</tr>
<tr>
<td>69,5%</td>
</tr>
</tbody>
</table>

Source: Authors of the Investigation

5.4.6.1. Individual Ownership of the Family Owned Business

The one - three range of entrepreneurs fall into this form of family ownership being the most frequent throughout the investigation (69.5 percent), while the four - five range account for a lower 20 percent.

5.4.6.2. Extra-Family Partners

A high 80.5 percent of entrepreneurs interviewed expressed not to have any partner outsider their family, which allows us to conclude that there is high concentration of family capital resources in the sample under analysis.

5.4.6.3. Concentration of Equity Holdings in the Manager of the Family Owned Business
Equity concentration (21 – 50 percent range) in the hands of the manager is the most frequent in the sample under analysis, with a 40 percent participation, which allows us to conclude that there is a relatively high proportion of equity control by those in charge of the management of the family business.

5.4.6.4 Shareholder Awareness of Entrepreneurial Goals and Participation in the Definition of Strategies of the Family Company

There is a significant percentage of companies in the sample under analysis (58.9 percent) in which shareholders are aware of the entrepreneurial goals set by the owner family and are also participants in the definition of business strategies (62.1 percent).

6. Conclusions

As a first instance, in light of findings from this investigation and the above analysis, there is confirmation of the working hypothesis in the sense that there are visible local trends reflecting lack of planning for generational transition in family owned companies.

The above reality is a reason for concern to the extent that the present world economic crisis posts new and high challenges for the survival of family companies. For this same reason, it is paradoxical that acceptance is granted to the importance of planning generational takeover while at the same time
accepting that no specific actions are being pursued to prepare candidates for management succession in the family owned business.

In practically 60 percent of known cases it is acknowledged that identification has taken place of the immediate management successor but, without existence of a concrete program for its professional training, a strategic mistake is undertaken that amplifies in a scenario of generalized economic crisis as the one we live in.

The above is even more relevant when taking into consideration the fact that over 40 percent of companies included in the sample have managers in the 51-60 years age range, which allows envisagement of the need for a soon to happen and unavoidable generational transition.

The current world economic crisis is causing the return to Colombia of many local national professionals as a result of downsizing by large corporations of international scope. It is an opportunity for many Colombian companies to reinitiate processes of generational transition interrupted r failed as a result of migration of candidates to succession. But the success of this effort will be largely dependent of the planning of punctual training and education policies for those who return with illusions focused on the motherland.

7. Bibliography


TRENDS IN SMALL FAMILY BUSINESS SUCCESSION PLANNING IN COLOMBIA

RESEARCH GROUP: FAMILY BUSINESSES

A. IDENTIFICATION OF THE PROBLEM

It has been traditionally acknowledged that in Colombia, family owned businesses tend to underestimate the importance of a timely training and preparation of the successors for the task of managing the business, and that this reality may have negative effects on the sustainability of family businesses. This is a matter of the utmost relevance considering that in Colombia 70% of companies are family-controlled businesses, according to an investigation conducted by the Colombian Superintendence of Companies in 2001.

Succession in family business management is nowadays one of the issues drawing great worldwide attention within the study of success and failure factors in Family Businesses. Authors such as Guinjoan and Llauradó (2000) argue that “planning succession increases the chances of survival for the family business, inasmuch as a Succession Plan is an exercise anticipating future personal, family and business events, aimed at influencing those events and shaping them according to specific interests”. Fred Neubauer and Alden G. Lank state in their now classical work The Family Business (1998) that senior management succession in family businesses is one of the most analyzed and studied issues as well as one of the main factors, if not the single most important one, affecting the chances that the business continues in the hands of the founding family. According to these authors, academics and researchers as much as advisors and members of family firms consider management succession to be the most important factor in planning family businesses.

Other authors, such as Gersick, Davis, Hampton and Lansberg (1997), suggest that in family businesses, the question of Succession is a transition process involving property, the family and the business itself.
On the other hand, Peter Leach (1996) notes that the problem of Succession is a greater challenge to the sustainability of organizations than most others, inasmuch as “the founder of a firm [...] faces powerful psychological deterrents to planning his retirement”, influenced by factors such as the reluctance to let go of control and power, the loss of identity, the inability to chose among children, the fear of retirement, and the jealousy and rivalry towards potential succeeding members.

B. RESEARCH QUESTION

¿Is it possible to perceive the existence of planning processes for generational change in small family businesses in Colombia?

C. HYPOTHESIS

There is a tendency in small family businesses in Colombia not to plan generational change.

D. OBJECTIVES

Studies in Colombia relating to the problem of succession of management in family businesses are rather scarce. Thus, it is relevant to validate locally the general worldwide trends regarding diagnosis and prognosis of management Succession in family businesses. We consider that the findings of this research can have strategic value for members of family businesses that are, or will be, going through a Generational Transition process as well as for those who are advising them on these processes.

E. METHODOLOGY

Between August 2008 and November 2009, a simple random sampling of 138 family businesses throughout Colombia was interviewed. Of these, 44 firms were in the industrial sector, 42 in the services sector and 44 in the commercial sector. Classified by their assets, 58.7% were, as per the distinction made by the Colombian legislation, small
companies and 41.3% were microenterprises. The random sample included First and Second Generation family businesses. They answered a questionnaire with 29 questions; additionally, an interview was held with the leading family executive of each organization.

F. FINDINGS

Among the many findings of this research, we would like to highlight the following:

1. In 60% of cases, the Successor has been identified, but is not being prepared.
2. In 40% of cases, the company leader is 51 to 60 years old, indicating the imminence of a future succession.
3. In 80% of cases, the Successee has not established when he or she will retire.
4. In 66% of cases, it is acknowledged and accepted that the probable Successor does not have enough experience outside the family business to take over Management.
5. In 64% of cases, it has been admitted than there are no concrete plans to train the Successor.
6. In 46% of cases, it has been acknowledged that policies and strategies are not adequately handed down to future successors.
7. In 79% of cases, there are no extrafamilial business partners.
8. 70% acknowledge the importance of planning generational transitions and 77% admit they have not implemented any strategies to facilitate this process.
G. CONTRIBUTION

First of all, the Working Hypothesis was confirmed, indicating that small and micro Colombian family businesses tend not to plan generational change. This is of concern for their sustainability since in the near future they will be unavoidably confronted with generational change.

Secondly, it is a paradox, and an indication of some pervading irrationally, that most heads of small family businesses acknowledge the importance of planning generational change, yet, at the same time, admit that they are not taking any steps to prepare the future Successors for the task.
“Learn or Die”:
The Development of an Assessment Framework for SME Entrepreneurial Learning Programs

55th ICBS World Conference: June 24-24, Cincinnati, Ohio, U.S.A.

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Abstract

The unique features of entrepreneurial learning, that involves multiple dimensions, are not easily captured and today few appropriate assessment frameworks exist. The aim of this paper is therefore to put forward an evaluation assessment framework for entrepreneurial learning and empirically illustrate its potential on a specific SME learning program. Based on a survey of owners/managers who took part in the government supported learning program krAft, an exploratory factors analysis and a regression analysis were conducted. The paper proposes a two dimensional framework of cognitive and social/emotional learning outcomes where both are strongly correlated to internal efficiency but only the social/emotional outcomes are correlated to external effectiveness. The paper therefore concludes that the mere focus on cognitive learning outcomes is not enough in order to successfully act upon business opportunities. Hence, the social/emotional learning dimension is of great importance, and should be utilized, in the development of arranged SME learning groups.
Introduction

Small and medium sized firms (SME) depend to a large extent on their ability to recognize and act on business opportunities. In small firms the owner and the manager is often the same person and has the responsibility to act on business opportunities which can lead to major strategic changes in the business (Duncan and Weiss, 1979; Storey, 1994). Thus, if SME owners/managers are to successfully provide goods and services to markets, they need the capability to exploit business opportunities (Reynolds et al., 2002) involving the introduction of new goods, services, raw materials, and organizing methods (Shane and Venkataraman, 2000). One possible way to increase venture performance may be through the specific learning SME owner/managers acquire and develop for handling the exploitation process (Choi and Shepherd, 2004; March, 1991; Sanchez 1996; Shane, 2003). Wick and León (1993, p.19) even stated that organizations must either “learn or die”. Recognizing the importance of learning, this paper focuses on government supported learning programs with the purpose to increase the owners/managers ability to develop a successful business. Entrepreneurial learning outcomes can broadly be understood as the knowledge and ability to identify and exploit business opportunities (Polities 2005). SME owner/managers who can develop this kind of learning from participating in learning programs have an increased ability to successfully develop and run businesses. Methods for assessing the outcomes from SME learning programs are an important issue for the design and evaluation of such programs. However, the unique features of entrepreneurial learning, that involves multiple dimensions, are not easily captured (Cope 2005; Rae 2000, 2006; Rae and Carswell 2001). The specific learning outcomes from arranged learning groups comprised of SME owner/managers, academics, and other experts are under debate and the need for an appropriate measure of such arrangements is therefore extensive. What
entrepreneurial learning outcomes may be developed in SME learning programs and how it affects the venture performance is both highly topical and very important. Considering this background the aim of this paper is to put forward an evaluation assessment framework for entrepreneurial learning and empirically illustrate its potential on a specific SME learning program.

In order to reach the aim of the paper an understanding of the potential aspects that may be included in such an assessment framework, as well as the relationship between the assessed individual entrepreneurial learning and associated changes in firm level performance outcomes, needs to be outlined.

**Theoretical framework**

**Individual- and organisational learning outcomes**

Learning is generally defined as the processes, as well as the identifiable and relatively permanent changes in knowledge and abilities that result from human interactions in specified contexts (compare, Brown and Dugid, 1991; Kolb, 1984; Lave and Wenger, 1991). In the SME context it is first and foremost the individual owners/managers who learn (Argyris and Schön, 1978; Dodgson, 1993) and thereafter transfer their learning to their ventures (Bontis et al., 2002; Duncan and Weiss, 1979; Kim, 1993; Sun and Scott, 2003). Changes in how business opportunities are identified and exploited would thus be considered a learning outcome related to their venturing (Politis, 2005; Sanchez, 1997). This paper focuses on the entrepreneurial learning.

However, it should be noted that entrepreneurial learning, which builds up the ability to exploit new business opportunities, consists of both individual as well as organisational learning processes. The individual owners/managers spur their learning outcome via a changed ability to make strategic decisions, in terms of delineating and
assessing the potential of new projects, analyze the efforts and risks involved in entrepreneurship, bestow legitimacy, and pursue entrepreneurial actions (Crossan et al., 1999; Jones and Macpherson, 2006; Quinn, 1992). This means learning outcomes result in changed routines, diagnostic systems, rules, or procedures (Argyris and Schön, 1978; Crossan et al., 1999) regardless if they consider a higher speed in developing a product, or ideas for developing new products or services to new markets. On the organisational level (i.e. organisational learning) Huber (2004) states that learning occurs when the organisation’s members revise their beliefs in ways that, when the beliefs are acted upon, improve the organisation’s performance. Prior research, for example, Bontis et al. (2002) has demonstrated that organizational learning at all levels has a positive impact on business performance. In this paper we do not aim at separating the intertwined processes of individual and collective learning but merely establish the relation between the individual entrepreneurial learning that occurs as a part of the learning program and specific aspects associated with venture performance. Thus, entrepreneurial learning would reflect an improved ability to manage the novelty and uncertainty in exploiting business opportunities which can be identified and described in terms of venture performance.

Entrepreneurial knowledge, or the ability to identify and exploit business opportunities (Polities, 2005), is considered vital for the survival and growth of small enterprises (Hoang and Antoniicic, 2003; Macpherson and Holt, 2007; Penrose, 1959). Such knowledge can be built, for example, on networking skills, the ability to analyse market conditions, and the courage to implement one’s ideas. Owners/managers face many different types of problems on the path of learning and creating entrepreneurial knowledge. Engaging in relevant competence-enhancing and development programs is one promising way to improve the situation. However, contemporary critics suggest that
general competence development programs are neither appropriate nor well functioning for these entrepreneurs. The criticisms are for example based on the understanding that owners/managers in small firms often play multiple roles and therefore are generalists, not specialists (Florén, 2005). As a result, conventional courses and specialist management training (with relatively high costs) may be impractical for owners/managers in small firms (Fuller-Love, 2006; Sadler-Smith et al., 2000). Hence, owners/managers need alternative programs to develop their entrepreneurial knowledge and competence.

While there has been extensive research to investigate pedagogical models in formal education, there is little knowledge about how owners/manages can learn, in ways other than traditional formal education (Gibb 1997; Storey, 1994). Scholars and practitioners have thus noted that external relations in learning programs can be a noteworthy possibility for entrepreneurial learning. External sources are often needed to initiate and stimulate improvements and tangible effects (Street and Cameron, 2007; Zang et al., 2006). Help from outsiders may also enable owners/managers to gain both explicit and tacit knowledge with the potential to influence their firms’ long-term ability to survive, grow, and innovate (Chrisman and McMullan, 2000; Jones and Macpherson, 2006; Lockett et al., 2008; Macpherson and Holt 2007). On way of involving outsiders in the entrepreneurial learning process is through learning groups (or programs) comprised of SME owners/managers, academics, and other experts. That is, in line with the empirical focus of this paper.

However, the distinctive nature of learning of owners/managers and the appropriateness of programs to support learning and development in small and medium-sized enterprises have been largely unexplored, and today there are no empirically based assessment frameworks for evaluating learning outcomes from SME learning programs.
In order to be able to evaluate such programs we need deeper knowledge of what owners/managers might learn in order to improve their ability to exploit business opportunities. To achieve this deeper knowledge multi-empirical evidence is needed (Hoang and Antoncic, 2003). Consequently, there is a need for a framework that can clarify changes in the groups of participating entrepreneurs and their businesses, a framework which in the future may be used to evaluate, classify, and measure learning outcomes in a multidimensional way.

Summarizing the previous discussion it can be claimed that the owners/managers participating in the learning group develop entrepreneurial knowledge (on the individual level). When later interacting with colleges, entrepreneurial knowledge (on the organisational level) is developed. Such entrepreneurial knowledge facilitates the ability to identify and exploit business opportunities which have shown to be the basis for the development of successful business, in this paper described as venture performance.

A first step in order to be able to outline such a framework is thus to create an understanding of previous research on entrepreneurial learning outcomes from SME learning programs.

**Learning outcomes from entrepreneurial learning programs**

Following the argumentation of Illeris (2002) and building on Bergh et al (2009), individual learning outcomes can be categorised into three broad dimensions; 1) a cognitive, 2) an emotional, and 3) a social learning dimension.

**The cognitive learning dimension**

The first of these dimensions is the cognitive dimension which represents changes in the entrepreneur’s thinking pattern. Following Neisser’s (1967) classical definition of cognition, this implies changes in how sensory input is transformed, reduced,
elaborated, stored, recovered, and used. As exemplified by the situations enumerated in Table 1, these cognitive changes can be important for decision making as they introduce new heuristic-based logics, improve alertness, and develop unique knowledge and effectuation (see for example, Mitchell et al., 2007). Hence, based on Bergh et al. (2009) it can be argued that cognitive changes that result from participating in a learning group may have significant implications for how entrepreneurs exploit business opportunities.

The cognitive learning could however be of different types (Aryris and Schön, 1978; Piaget 1959; Senge, 1990). Ellstöm (2001) make a distinction between adaptive and innovative learning where adaptive learning, on the one hand, concerns changes that occur within a given framework, for example, within a given set of norms, values, or structures. Innovative learning on the other hand break with the past and go beyond the given. Based on the comprehensive case study of Bergh (2009), focusing on the individual entrepreneurs’ learning processes, cognitive changes (involving both adaptive and innovative learning) can be exemplified with entrepreneurs expressing the benefits of getting others’ views and insights of how they work and why, in order to be able to take a step outside their own company.

**The emotional learning dimension**

The second dimension is the emotional changes which represents emotional changes in terms of changed affective states (compare, Russell and Barrett, 1999) for the entrepreneurs. This dimension of learning includes new motivation, excitement, and an increased self-efficacy (Bandura, 1986) in relation to various accomplishments related to being an entrepreneur. Prior research also indicates that a positive affect (i.e., emotions and feelings) influences creativity (see for example, Estrada et al., 1994).
Given the role creativity plays in recognizing new opportunities, it is suggested that that this is also the case regarding influences on entrepreneurial processes (Baron, 2008). Moreover, considering the link between emotional factors and business opportunities, prior research has, for instance, indicated that emotions can be important for acquiring resources (Baron, 2008), persistence (Bird, 1989), motivation (Bierly et al., 2000), and realizing dreams (Ma and Tan, 2006). As exemplified in Table 1, emotional changes could therefore be useful for developing ideas, recognizing complex patterns, organizational design, and employee mobilization among other things. Thus, emotional changes for entrepreneurs in learning groups may have implications for their capacity to exploit business opportunities. Based on Bergh (2009) it is also clear that participating in the learning group seemed to generate energy and courage to try new ideas and inspire changes when needed.

**The social learning dimension**

The third dimension related to social changes is a dimension thoroughly examined in prior literature and often argued to be an important aspect of entrepreneurship (see for example, Ariño et al., 2001; Ariño and Torre, 1998; Baum et al., 2000; Borgatti and Foster, 2003; Casson and Giusta, 2007; Macpherson and Holt, 2007; Street and Cameron, 2007). The social learning dimension is related to social changes for the owners/managers, to how social networks within the learning groups evolve and how the owners/managers develop their social skills. As shown in Table 1, changes in how entrepreneurs view their social network can play a significant role in situations where they need to acquire resources and information; build legitimacy of suitable partners for joint production, develop products, and conduct marketing activities (see for example, Lundvall and Johnsson, 1994; Lui, 2009). This means that social changes among the
networking entrepreneurs may have implications for how the entrepreneurs use the social network to improve their capacity to act upon business opportunities. Thus, the social changes that participating entrepreneurs may experience can have significant implications for how they use the interpersonal network to build an interorganisational network to achieve and organize resources and legitimacy necessary to exploit business opportunities.

In the following table a summary of the three dimensions of learning outcomes are grouped together with examples of opportunity exploitation activities where this learning is particularly useful. In the table a short description is also given of how the changes empirically materialise themselves.

**Table 1. Summarising table of the three learning dimensions (Bergh et al 2009)**

<table>
<thead>
<tr>
<th>Learning dimensions</th>
<th>Description</th>
<th>Examples of opportunity exploitation activities where this learning is particularly useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive learning dimension</td>
<td>Changes in the entrepreneur’s thinking pattern.</td>
<td>– Decision making&lt;br&gt;– Alert to new opportunities&lt;br&gt;– Information interpretation&lt;br&gt;– Problem solving&lt;br&gt;– Pattern matching</td>
</tr>
<tr>
<td>Emotional learning dimension</td>
<td>Changes in the entrepreneur’s affective state.</td>
<td>– Idea development&lt;br&gt;– Finding complex patterns&lt;br&gt;– Organizational design&lt;br&gt;– Market making&lt;br&gt;– Employee mobilization</td>
</tr>
<tr>
<td>Social learning dimension</td>
<td>Changes in how the entrepreneur perceives the available social network.</td>
<td>– Information acquisition&lt;br&gt;– Resource acquisition&lt;br&gt;– Legitimacy building&lt;br&gt;– Marketing&lt;br&gt;– Production&lt;br&gt;– Funding issues</td>
</tr>
</tbody>
</table>

Following the previous discussion on entrepreneurial learning and its relations to organisational outcomes, as well as the three dimensions proposed as a part of the learning outcomes from entrepreneurial learning programs, the next section will first
describe the empirical setting and then focus on the development of the assessment framework.

Methods

Sample and Data

The Swedish krAft-program (acronym based on the Swedish translation of competence, reflection, business development, and growth) provided the empirical setting for this study. The krAft-program was a policy-supported program carried out between 2000 and 2005 designed as a forum to exchange experiences among owners/managers working in firms with up to 250 employees. Typically, ten to fourteen owners/managers from five to seven enterprises participated in each learning group. University experts and consultants helped the owners/managers establish and manage the groups to reach learning and business development goals. Generally, the participants came from the same geographical area in Sweden and met in person on several occasions. During a one-year period, the group members met for twelve days (divided into six sessions) where they discussed problems that the group believed were interesting and meaningful. The sessions were scheduled from lunch on day one until lunch day two. The meeting location was usually an isolated area, which meant participants stayed on-site and had time to interact informally with other network members in the evenings and during meals. The program was financed 50 percent by the state and 50 percent from a fee paid by the attending firm (each firm paid around 4300 euro). The krAft project aimed to achieve both individual competence and business development among SMEs, which the program sponsors hoped would eventually lead to economic growth.
An initial scanning of membership lists and registers revealed that the overall program included 101 separate networks, populated by 991 participants. Although there were many of these that did not actively participate in the program (that is, the register was overly inclusive), all participants were targeted for this research. In a later research stage (described below) the participants who were not active were excluded.

Almost three years after the krAft project was completed, data were collected for this paper and assessment of the concrete learning outcomes obtained; that is, to what extent the participant’s capacity to exploit business opportunities had improved. Supported by previous research (Clement, 1982; Kirkpatrict, 2006), a three-year time lag was estimated to be necessary for valid estimates of the program. Data were collected through sending a survey by mail to all listed participants from the initially provided registers. Attached with the mail was a prepaid return envelope addressed to the university and ensured confidentiality. After the questionnaires were sent out, we were directly informed that some of the former participants could not be reached because they were not engaged in venturing. Many of these had not been actively engaged in venturing during the program and notified us of this fact. Moreover, we were informed that some owners/managers had never actively participated nor enrolled in the program and should be excluded from the list of possible companies in the krAft program. All of these exceptions (adding up to a total of 206) were excluded from the study because we only targeted owners/managers who could evaluate the effects of participating in the network for the venture they represented. We ended up with a final sample of 785 participants. In total, 109 usable responses were returned, for a response rate of 14 percent.
To assure the generalizability of this study’s conclusions the risk of biased data was examined. A random sample of 10 percent of the non-response individuals were selected and contacted by phone. The participants were asked why they did not participate in the study in order to classify whether non-respondents were passive or active. It was found that a vast majority could be classified as passive, suggesting that there is a low risk for a non-response bias. Roger and Stanton (2007) state as a general rule, passive non-respondents do not differ from respondents.

Measures

The survey instrument was based on self-reported data from the questionnaires on a 5-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). Scale scores were calculated by averaging responses of the related items. Exploratory factors analysis suggested that the construct measures displayed discriminant and convergent validity; whereas scale alphas of 0.9 and higher indicated they also displayed high levels of reliability (Nunnally, 1978).

Individual learning outcomes were assessed using 16 items (see Table 2). The items were derived from Bergh et al. (2009) multidimensional conceptualization framework on learning outcomes. This set of survey items started with “By attending krAft…” in order to relate the changes to the participation of the learning program. Sample items included: “After attending krAft you have developed knowledge and skills which could be used in your work”, “After attending krAft you are able to see your work from different perspectives than before”, “After attending krAft you developed your ability to cooperate with others”, and “After attending krAft you developed a feeling that you are more capable”.

12
Associated changes in firm level performance was assessed using 11 items measure, inspired by Bontis et al.’s (2002) strategic learning assessment map, Marsick and Watkin’s (2003) research on learning and businesses and Wu et al (2003) measurement of business performance (see Table 4). The measure assessed specific aspects of performance on the strategic business unit level and as an effect of the participation in the learning program. The ability to exploit business opportunities is shown by the performance outcomes which are captured both in terms of internal efficiency development and external effectiveness market development. Sample items included: “After attending krAft the firm has been able to develop a strategy that will provide future advantage”, “After attending krAft the firm developed management methods for a more effective work”, “Attending the krAft helped the firm to develop new products or services”, and “After attending krAft the market share increased.”

Control variables. Data was also captured on potentially confounding variables that could influence the learning-performance relationship. A control has been conducted for the effects of venture size (Lyles and Salk 1997; Nason, 1994; Wincent, 2006) measured by the number of employees before attending the learning network. The argument to control for size is that an entrepreneur involved in a larger venture will have more difficulty sharing knowledge from the network to the firm than an owner/manager from a firm with only a few employees (Bontis et al., 2002). It may also be more difficult to implement what has been learned due to a more complicated decision structure involving more partners. These conditions should reduce the effects of learning. We also controlled for the participants position in the firm by separating owner from top managers as we believed that an owner had better influence of changing the firm than a top manager. Finally, the study controlled for the effect of the participants’ industry experience (Gnyawali et al., 1997). An owner/manager with more
industry experience devise a strategy faster than a novice (cf. Glaser and Chi, 1989; Larkin, 1983), which can increase the capacity to act upon business opportunities. Experience was measured by the participant’s years of work experience in the industry.

**Results**

The 16 learning outcomes items, presented in *Table 2*, were factor analyzed. The question one “through participation you reinforced what you already had known” was removed as it did not correlate with any of the other 15 items. With the first item removed, the data showed measure of sampling adequacy of .946; the correlation matrix differed significantly from the identity matrix ($\chi^2=1395.50$, df=109, p<.00). Each variable’s MSA was in excess of .9.

*Table 2 – see appendix*

Application of the principal components extraction method, with eigenvalue of more than one as criterion for determining the number of factors, resulted in a two-factor solution. After VARIMAX rotation, the first factor accounted for 37.15% of variance, the second for 34.85%. The cumulative variance extracted was 72%. *Table 3* show factors and factor loadings. Given the sample size of 109, factor loading below .5 could be considered insignificant. The alpha reliability of the Cognitive scale is .94 and of Social/emotional is .93, both well in excess of the .7 cut-off recommended for the explorative research.
Table 3, Learning outcomes: results of principal components analysis

<table>
<thead>
<tr>
<th>Factor 1 – Cognitive outcomes</th>
<th>Component</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive</td>
<td>Social/</td>
</tr>
<tr>
<td>1 Got knowledge and qualifications that can be used at work(^a)</td>
<td>0.76</td>
<td>0.32</td>
</tr>
<tr>
<td>2 Increased skills and competences that are useful for your work</td>
<td>0.84</td>
<td>0.28</td>
</tr>
<tr>
<td>3 Improved job performance when used knowledge gained from KrAft</td>
<td>0.74</td>
<td>0.44</td>
</tr>
<tr>
<td>4 Became aware of the factors that affect you work</td>
<td>0.72</td>
<td>0.41</td>
</tr>
<tr>
<td>5 Received new knowledge of something you were not aware before</td>
<td>0.82</td>
<td>0.30</td>
</tr>
<tr>
<td>6 Got &quot;aha experiences&quot; about something you were not aware before</td>
<td>0.78</td>
<td>0.37</td>
</tr>
<tr>
<td>7 Viewed things from a different perspective</td>
<td>0.67</td>
<td>0.47</td>
</tr>
<tr>
<td>8 Changed your understanding of different work-related problems</td>
<td>0.72</td>
<td>0.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor 2 - Social and emotional outcomes</th>
<th>Component</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Became energized by other KrAft participants</td>
<td>0.30</td>
<td>0.76</td>
</tr>
<tr>
<td>10 Develop a feeling that you could accomplish what you aspire to achieve in your work role</td>
<td>0.45</td>
<td>0.70</td>
</tr>
<tr>
<td>11 Felt that meeting provided you with energy and motivated you</td>
<td>0.34</td>
<td>0.78</td>
</tr>
<tr>
<td>12 Became more proud about your work</td>
<td>0.30</td>
<td>0.80</td>
</tr>
<tr>
<td>13 Became better in discussing issues of importance for your business</td>
<td>0.42</td>
<td>0.78</td>
</tr>
<tr>
<td>14 Improved your capability to create new valuable contacts</td>
<td>0.42</td>
<td>0.76</td>
</tr>
<tr>
<td>15 Became better in cooperating with others</td>
<td>0.32</td>
<td>0.75</td>
</tr>
</tbody>
</table>

\(^a\) Responses on a five-point scale 1='strongly disagree' to 5='strongly agree'.

The same procedure, principal components, was applied to the firm level outcomes. The factor-loadings and factors extracted are presented in the Table 4. With MSA measure of .92 and the test of sphericity significant at \(p<.00\), the variables are well suited for the factor analysis. The resulting two-factor solution accounted for 73.34% of the variance. The Cronbach alpha of the related scales are .93 and .92, respectively.
### Table 4. Changes in firm-level performance: results of principal components analysis

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Firm developed a strategy that will provide future advantage&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.39</td>
</tr>
<tr>
<td>2</td>
<td>Firm developed a structure appropriate for the strategic direction</td>
<td>.39</td>
</tr>
<tr>
<td>3</td>
<td>Firm has developed management methods for a more efficient work</td>
<td>.23</td>
</tr>
<tr>
<td>4</td>
<td>Firm developed a system and documentation for handling important information</td>
<td>.26</td>
</tr>
<tr>
<td>5</td>
<td>Firm developed a more appropriate culture</td>
<td>.38</td>
</tr>
<tr>
<td>6</td>
<td>Firm’s productivity increased</td>
<td>.49</td>
</tr>
<tr>
<td>7</td>
<td>Time for introducing new products/services decreased</td>
<td>.69</td>
</tr>
<tr>
<td>8</td>
<td>Firm’s market share increased</td>
<td>.76</td>
</tr>
<tr>
<td>9</td>
<td>Firm’s customers became more satisfied</td>
<td>.69</td>
</tr>
<tr>
<td>10</td>
<td>Firm has developed new products/services</td>
<td>.83</td>
</tr>
<tr>
<td>11</td>
<td>Firm has introduced new products and services</td>
<td>.85</td>
</tr>
<tr>
<td>12</td>
<td>Firm changed its existing products/services</td>
<td>.69</td>
</tr>
<tr>
<td>13</td>
<td>Firm established itself on new markets</td>
<td>.77</td>
</tr>
</tbody>
</table>

<sup>a</sup> Responses on a five-point scale 1=‘strongly disagree’ to 5=‘strongly agree’.

A regression analysis was thereafter used to examine the relationship between individual learning outcomes and business-level outcomes. In the analysis both dependent and independent variables are equally-weighed summated scales corresponding to the extracted factors. The descriptives and correlation matrix of the scales are summarized in Table 5. While a structural equation model, with full confirmatory factor analysis measurement component would be more appropriate to establish and test the hypothesised relationships, the sample size of 109 does not meet the assumption of such procedure, even if we use the lowest maximum likelihood requirement of 2 observations per estimated moment. Thus, subsequent analysis focuses on the summated scales.
Table 5. Means, SD, a correlation among learning outcomes and changes in firm-level performance

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>1. COGNITIVE</td>
<td>3.48</td>
<td>.88</td>
<td>.94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. SOCIAL/EMOTIONAL</td>
<td>3.44</td>
<td>.92</td>
<td>.78*</td>
<td>.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. INT. EFFICIENCY</td>
<td>2.89</td>
<td>.87</td>
<td>.66*</td>
<td>.64*</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>4. EXTERNAL EFFECTIVENESS</td>
<td>2.84</td>
<td>.90</td>
<td>.59*</td>
<td>.61*</td>
<td>.77*</td>
<td>.92</td>
</tr>
</tbody>
</table>

*-significant at p<.1; reliabilities of the measures on the diagonal in italics

In Table 6 the results of the regression analysis is presented. The first model has Internal Efficiency as dependent variable, and COGNITIVE, SOCIAL/EMOTIONAL, Industry experience, Position, and Firm size as independent variables. The model is significant overall and accounts for 50% of the variation in the dependent variable (adj R2=.5). Both cognitive and social/emotion, outcomes are significant and positive. The industry experience is also positive and significant.

The second model produces somewhat different results. The dependent variable isEXTERNAL, and the independent variables are the same as in the first model. The equation again is significant overall at p<.00, and explains 43% of variation in the dependent variable. The COGNITIVE effect turned out as not significant, while SOCIAL/EMOTIONAL is still significant. Firm size was also positive and significant.
Table 6. Regression models

<table>
<thead>
<tr>
<th></th>
<th>INTERNAL</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>p&lt;</td>
<td>B</td>
<td>S.E.</td>
<td>p&lt;</td>
</tr>
<tr>
<td>Intercept</td>
<td>.12</td>
<td>.31</td>
<td>.71</td>
<td>.27</td>
<td>.35</td>
<td>.43</td>
</tr>
<tr>
<td>COGNITIVE</td>
<td>.34</td>
<td>.13</td>
<td>.01</td>
<td>.22</td>
<td>.15</td>
<td>.14</td>
</tr>
<tr>
<td>SOCIAL/EMOTIONAL</td>
<td>.39</td>
<td>.13</td>
<td>.00</td>
<td>.51</td>
<td>.14</td>
<td>.00</td>
</tr>
<tr>
<td>Industry experience</td>
<td>.02</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.16</td>
</tr>
<tr>
<td>Position</td>
<td>-.03</td>
<td>.14</td>
<td>.82</td>
<td>-.15</td>
<td>.16</td>
<td>.36</td>
</tr>
<tr>
<td>Firm size</td>
<td>.00</td>
<td>.00</td>
<td>.25</td>
<td>.00</td>
<td>.00</td>
<td>.06</td>
</tr>
</tbody>
</table>

adj $R^2$   
F(5,89) $19.96$  
$F(5,89)$ $15.26$

Discussion

The first part of the aim of this paper was to develop a multidimensional assessment framework for SME learning programs. In line with previous research a three factor framework incorporating cognitive, emotional, and social outcomes was suggested (Illeris, 2002; Bergh et al 2009). However, the results suggested the presence of only a two-factor framework and do not allow differentiating between the emotional and social outcome dimension. Therefore, these dimensions were integrated and referred to as social/emotional outcomes. Furthermore, previous researchers divided the cognitive dimension in two sub-dimensions; adaptive and developmental learning (Ellström, 2001). Adaptive learning represents an extension of knowledge, while innovative learning represents a radically new knowledge. While our survey items were a mix of both sub-dimensions representing two types of learning (see Table 4 for more information of the items comprising the framework), we again could not differentiate between these two aspects.

The second part of the aim of the study was to test the relation between the developed learning assessment and associated changes in venture performance. The regression analysis showed a positive relationship between the cognitive learning
outcome and internal efficiency, for example the development of an advantageous strategy, culture etc. (compare, Cohen and Levinthal, 1990). The social/emotional learning was also shown to be positively correlated to internal efficiency, although not as strongly as for the cognitive learning dimension. The social/emotional learning is instead strongly correlated to external effectiveness (for example, the development of new markets, products, etc). Interestingly there was no association between the cognitive learning dimension and external effectiveness.

Consequently, it could be concluded that a mere focus on cognitive learning outcomes is not enough in order to reach external effectiveness. Acting on business opportunities demands a focus on social/emotional outcomes as a part of the learning process. Even if cognitive learning outcomes can create both knowledge and ability to identify and exploit business opportunities, “something” in the social/emotional learning outcomes is needed in order to create or facilitate action to peruse new opportunities. Our interpretation is that some of the questions used to assess the emotional part of social/emotional learning are similar to questions used by researchers to assess self-efficacy. Previous research show that beliefs about one’s own abilities to successfully execute work at a desired level of performance (Bandura, 1986), are likely to affect the ability to acquire knowledge and apply it to a venture (Baldwin and Ford, 1988; Holton, et al., 2000; Kraiger et al., 1993; Noe, 1986). People with higher self-efficacy are more likely to act upon advice they are given because they believe they have the ability to use the knowledge gained and deliver changes for the organization (Tams, 2008). Self-efficacy (as a part of the social/emotional learning outcomes) is thus important in order to go beyond mere changing strategies, internal structures, management methods, or culture. This understanding also helps in explaining why formal programs – mainly focusing on cognitive learning outcomes – are not beneficial
for owners/managers in exploiting business opportunities and achieving increased venture performance. However, while these findings by no means suggest that the cognitive aspects are irrelevant or unimportant; what we want to point out is that other forms of learning outcomes may be more influential in enhancing a venture's external performance.

Based on the analysis, and as shown in the figure below, the cognitive aspects contribute with the knowledge but not to the personal characteristics (self-efficacy) needed in order to achieve the external effectiveness required to act on opportunities. Hence, the social/emotional learning outcomes are of great importance in arranged learning groups.

**Figure 1.** *Learning dimensions in relation to internal efficiency and external effectiveness.*
The final part of the aim of this study was to address the potentials of the measurement framework for the design of learning programs addressed to SME owners/managers. Based on the findings it can be concluded that this understanding have potential implications for entrepreneurial endeavours, mainly for three different reasons. First, the findings offer insights to how academics and governmental initiators, on a policy level, could improve the development and implementation of such learning arrangements and entrepreneurial training in general. Second, the presented framework gives insights and tentative guidelines for actors who, on a practical level, intend to arrange learning groups for SME managers. Third, in doing so, the findings also give practical implications on how to improve the outcome of the programs from a participant perspective and contribute to the SME managers’ ability to successfully develop and run business. That is, to integrate social/emotional learning dimension into the learning process in a deliberate way.

To conclude, the study provides both theoretical as well as practical implications. In terms of theory development, the study contributes by presenting an assessment framework for entrepreneurial learning that captures important aspects of cognitive and social/emotional changes at the level of the participating SME owner/manager. The findings moreover suggest that entrepreneurial learning outcomes needs to be discussed in relations to self-efficacy (Bandura 1986) as it is a central characteristic among successful SME managers (see for example. Poon et al. 2006; Clercq and Arenius, 2006). We therefore argue that self-efficacy as a learning outcome – as well as a part of the multidimensional construct presented – is an important objective in order to reach learning program effectiveness (Holton 2002; Martocchhio and Hertenstein 2003).
Limitations and suggestions for future research

Finally, there are some limitations to the present study that should be addressed in future research. First, in this study we used self-reported data and although consistent with past research practices (see for example, Colvin and Slevin, 1989; Lyles and Salk, 1996) there can be doubts that perceived outcomes represent actual learning outcomes. Therefore we suggest the development of measurements of cognitive and social/emotional pre-tests and post-tests (for example, Price and Randall, 2008). This type of learning assessment data should then be tested against objective financial venture performance data. Second, future research should use a confirmatory factor analysis to establish the discriminant and convergent validity of the proposed framework. Finally, it is also important to recognize that this study focused on arranged SME learning programs. Thus, the results cannot be generalized to other kinds of SME learning arrangements which have other purposes than the ones studied here. The measurement framework developed in this present study may however be worthwhile to test in similar type of learning programs.
References


Learning on Strategic Decision Making”, Conference Proceedings of the Academy of Management, Boston, MA.


Table 2, Means, SD, and correlation matrix of the individual learning outcomes

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>7</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reinforce already known</td>
<td>3.56</td>
<td>.91</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<td>11</td>
<td>12</td>
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<td>14</td>
<td>15</td>
</tr>
<tr>
<td>2 Knowledge and qualifications</td>
<td>3.71</td>
<td>.89</td>
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<td>1</td>
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<td>3</td>
<td>4</td>
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<td>10</td>
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<tr>
<td>3 Skills and competences</td>
<td>3.47</td>
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<td>.74*</td>
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<td>4 Improved job performance</td>
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<td>.01</td>
<td>.68*</td>
<td>.79*</td>
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<td>5 Awareness of factors</td>
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<td>.07</td>
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<td>.63*</td>
<td>.66*</td>
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<td>10</td>
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<tr>
<td>7 &quot;Aha experiences&quot;</td>
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<td>.15</td>
<td>.63*</td>
<td>.70*</td>
<td>.66*</td>
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<td>8 Different perspective</td>
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<td>.59*</td>
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<td>.60*</td>
<td>.69*</td>
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<td>6</td>
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<tr>
<td>9 Change of understanding</td>
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<td>.62*</td>
<td>.70*</td>
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<td>.63*</td>
<td>.69*</td>
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<td>10 Energized</td>
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<td>.48*</td>
<td>.50*</td>
<td>.55*</td>
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<td>.45*</td>
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<td>.55*</td>
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<td>2</td>
<td>3</td>
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<tr>
<td>11 Ready to accomplish</td>
<td>3.38</td>
<td>1.04</td>
<td>.08</td>
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<td>.58*</td>
<td>.64*</td>
<td>.57*</td>
<td>.54*</td>
<td>.62*</td>
<td>.64*</td>
<td>.61*</td>
<td>.64*</td>
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<td>2</td>
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</tr>
<tr>
<td>12 Energy and motivation</td>
<td>3.78</td>
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<td>.01</td>
<td>.53*</td>
<td>.53*</td>
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<td>.63*</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>13 More proud</td>
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<td>1.16</td>
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<td>.45*</td>
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<td>.71*</td>
<td>.71*</td>
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<td>2</td>
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</tr>
<tr>
<td>14 Better in discussing</td>
<td>3.43</td>
<td>1.08</td>
<td>.09</td>
<td>.59*</td>
<td>.55*</td>
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<td>2</td>
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<tr>
<td>15 New contacts</td>
<td>3.52</td>
<td>1.06</td>
<td>.08</td>
<td>.59*</td>
<td>.60*</td>
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<td>.60*</td>
<td>.65*</td>
<td>.64*</td>
<td>.68*</td>
<td>.67*</td>
<td>.80*</td>
<td>1</td>
</tr>
<tr>
<td>16 Better in cooperating</td>
<td>3.14</td>
<td>1.09</td>
<td>.03</td>
<td>.46*</td>
<td>.58*</td>
<td>.50*</td>
<td>.53*</td>
<td>.52*</td>
<td>.57*</td>
<td>.54*</td>
<td>.52*</td>
<td>.65*</td>
<td>.56*</td>
<td>.67*</td>
<td>.73*</td>
<td>.72*</td>
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</tr>
</tbody>
</table>

*p<.01  a Responses on a five-point scale 1=’strongly disagree’ to 5= ‘strongly agree’.
Differences between Turkish Entrepreneurial Teams with or Without Start-Up Experience

Dilek Tuten and Semra F. Ascigil

This paper aims to search differences between novice and experienced entrepreneurial teams from human capital and social capital perspective. The findings revealed that not demographics but firm and entrepreneurial team sizes differ between two types. Moreover, it is found that the networking preferences differ in that experienced teams establish more linkages with suppliers. Another comparison on environmental scanning activities showed that entrepreneurial teams with prior start-up experience engages in more explicit tracking of activities and tactics from competitors, special market research studies, information exchange with academia, and utilized monitoring and surveying to identify potential investors compared to that of novice teams.

Introduction

Entrepreneur as an individual is selected as the unit of analysis in most studies. This may be the tradition in studies exploring venture’s foundation stage. Some research exploring venture’s success after it comes to existence focus on individual entrepreneur with an assumption that the new business is an extension of the founding entrepreneur (Chandler, and Hanks 1994). There is limited number of research done to explore the outcomes of efforts in starting a business i.e. whether they could succeed in staying in business. Moreover, types of entrepreneurs such as novice and experienced entrepreneurs have become a variable in these studies only recently. Research distinguishing these types bases definitions on whether entrepreneurs have start-up experience or not.
However, Wiklund and Shephard (2008) underline the existing disagreement over definition of novice and habitual entrepreneurship types. In this study, we focus on novice and experienced entrepreneurship from the perspective of entrepreneurial teams. An entrepreneurial team is a novice if there are no members with prior founding experience. A novice individual, therefore can fill the experience gap by the experiences of other members in the team, which makes the team as a whole an experienced one.

Our approach therefore rests on the Upper Echelon Theory which emphasized that top management teams exert a great influence on strategic choice in their organizations and argued that the managers’ cognitive bases are the mental guidelines which support their decisions and which accordingly affect the results in their companies (Wiersema, and Bantel 1992; Finkelstein, and Hambrick 1990). The shared cognitions of team members were found to influence the company results (Hambrick, and Mason 1984; Wiersema, and Bantel 1992; Knight, Pearce, Smith, Olian, Sims, Smith, and Flood 1999; Canella, Pettigrew, and Hambrick 2001; Camelo-Ordaz, Hernandez-Lara, and Valle-Cabrera 2005).

Similar to top management teams, most definitions consider entrepreneurial teams as comprising of members who hold significant ownership stakes in the venture and/or involved in strategic decision making (Ucbasaran, Lockett, Wright, and Westhead 2003). Evidence based on the superior performance of ventures owned by entrepreneurial teams relative to those owned by a solo entrepreneur suggests that entrepreneurial teams matter as in top management teams (Cooper, and Bruno 1977; Roure, and Maidique 1986; Weinzimmer 1997). In contrast to the top management team literature, however, the study of entrepreneurial teams has been constrained by methodological problems. For
instance, unlike the earlier studies based on publicly available data on the demographic characteristics of the top management team governing large established firms, such data on entrepreneurial team members are unavailable. Therefore, despite recognition of the importance of entrepreneurial team composition, research in the area is still in its infancy. With the present study, an important need will be partially met concerning existing literature.

**Novice and Experienced Firms: Theory and Hypothesis**

Organizational demography suggests that group demographic characteristics or social compositions can affect group decision making, which then influences organizational outcomes. Pfeffer (1983) suggested that organizational demography was an important construct, and that the entire organization’s demographic composition may partially explain organizational outcomes. Organizational demography may account for various organizational outcomes, such as change, adaptation, innovativeness and performance. For instance, long tenured work groups would be less adaptive and innovative, since they would develop rigidity to established practices and become insulated from critical areas (Pfeffer 1983). Moreover, cohort studies (e.g. McNeil, and Thompson 1971) suggest that tenure gaps in an organization would create conflicts between newcomers and veterans.

Relationships between the demographic composition of the top management team and organizational outcomes such as innovativeness have been searched. It is found that young, short-tenure and highly educated teams are relatively more innovative independent of the type of industry (Bantel, and Jackson 1989, O’Reilly, and Flatt 1989). Top management team members’ organizational tenure, on the other hand, was found to
be significantly associated with strategic persistence, or absence of change (Finkelstein, and Hambrick 1990; Grimm, and Smith 1991; Wiersema, and Bantel 1992).

The differences between novice and experienced entrepreneurs are explored by other researchers at individual level. Baron (2008) studied two groups and found dissimilar age, life history, educational background, etc. Davidsson and Honig (2003) and Diochon, Menzies, and Gasse (2008) found education being unrelated to starting and sustaining a new business. Taking together, these findings lead to the following hypothesis;

\[ H1: \text{Novice and experienced firms’ entrepreneurial teams are different with regard to average age, education, average tenure, and average organizational tenure.} \]

Wiklund and Shepherd (2008) argued that experienced entrepreneurs more often organized subsequent actions by creating independent organizations unlike novice entrepreneurs who are more likely to organize portfolio entrepreneurship within existing firms. Considering the differences highlighted in literature, we hypothesize that;

\[ H2: \text{Entrepreneurial teams in novice and experienced firms are different with regard to how they form their businesses, e.g. firm size, entrepreneurial team size, and team formation modes.} \]

Small businesses have limited capacities in terms of resources; therefore, they outsource certain parts of the value chain and cooperate with other economic actors with complementary assets. External linkages have an important role in the acquisition of these assets and identification of innovative opportunities. Referred to the need for establishing external networks Hakansson and Snehota (1990) defined network as “the web of relationships of an organization with identifiable counterparts”. In order to
enhance innovative activities, firms should be embedded in socioeconomic networks consisting of long-term webs of relationships with customers, suppliers, financiers, competitors, universities, trade associations, etc. (Granovetter 1985). The strategic actions take place within the framework of these relationships (Fletcher, and Hardill 1995). Firms enter into relationships with these parties for variety of reasons. The most important one is to obtain information and resources necessary in the adoption or development process of innovation (Hendry, Arthur, and Jones 1995). Organizational learning theory suggests that external integration and boundary learning expansion efforts, for instance; bringing in knowledge from outside the organization, enable firms to explore new theory-in-use (Argyris, and Schon 1978) and knowledge which at the same time facilitates radical innovation (Shu 2005). Social capital theory also highlights the importance of relations whereby social capital creates a context for social interactions and facilitates the formation of new linkages (Spence, Schmitpeter, and Habisch 2003) to boost innovative activities.

Entrepreneurial team’s involvement in networking activities suggests an advantage from resource dependency perspective. Entrepreneurs leverage their business contacts to access resources needed and networking might at the same time minimize costs of acquisition of such resources. The resultant contacts may present opportunities to obtain particularly information which may be crucial for small businesses. Baron and Henry (2006, 2008) suggested that the experience acquired in time helped entrepreneurs to develop their effective network building skills. Among these, cognitive approaches exist aiming to find out how both types respond to typical decision-making problems when creating a new business (Dew, Read, Sarasvathy, and Wiltbank 2008).
research findings particularly are of interest with regard to identified difference in establishing partnerships. Experienced entrepreneurs are found to develop partnerships with stakeholders and brought on board more frequently by experienced entrepreneurs. Also, Westhead, Ucbasaran, and Wright (2005) suggested that experienced entrepreneurs have accumulated skills and experience that enable them to discover additional business opportunities. Thus;

$H3$:  *Experienced firms engage in networking more than novice firms.*

Firms have to gather information by scanning and controlling their environments in order to adapt the changes, survive and flourish, because environments create both threats and opportunities for firms (Hambrick 1982; Daft, Sormunen, and Parks 1988). Since the environment is full of unstable and unpredictable events, organizations are affected from the environment more than any other factors (Duncan, 1972). Yet, the processes of scanning and interpreting environmental changes provide the external intelligence for the people who have the authority for decision making in order to formulate strategies and implement them successfully (Elenkov 1997). According to Auster and Choo (1993), managers function as an “information processing systems” that receive information, direct its flow and take action based on information acquired. In order to explain the need for environmental scanning in more detail, it is necessary to define environmental layers and strategic uncertainty.

As defined by Duncan (1972), environment is the relevant physical and social factors outside the boundary of an organization that are considered while making organizational decisions. According to Bourgeois (1980), the environment can be conceptualized as having several sectors that exist in two layers. The first layer closest to
organization has direct impacts on business strategy and is called task environment. The task environment includes environmental sectors such as competitors, suppliers and customers with which the organizations have direct transactions. The second (outer) layer is called the general environment and refers to the sectors such as social, demographic and economic which indirectly impacts the organization. Sectors in the task and general environment are expected to influence scanning and other information gathering activities since they differ in uncertainty. Moreover, Miles, Snow and Pfeffer (1974) theorize that managers respond basically what they perceive. Strategic actions depend on managers’ perceptions and interpretations of the environment (Schneider, and De Meyer 1991). If the match between managers’ perceived environmental uncertainty and true environmental volatility is high, then the economic performance of a firm is also high (Bourgeois, 1985). Therefore, it is important for decision makers to notice the changes and interpret them correctly in order to make the needed adjustments to organization’s strategy or structure (Pfeffer, and Salancik 1978).

Perceived environmental uncertainty is defined as the absence of information about organizations, activities and events in the environment (Huber, and Daft 1987) or the difference between the amount of information necessary to perform a task and the amount of information which has already been obtained (Galbraith 1977). However, perceived environmental certainty by itself does not result in scanning behavior. If the external events are not considered as important for organizational performance, managers may not be interested in them (Pfeffer, and Salancik 1978). Information from important sectors of the environment may become a source of competitive advantage (Dutton, and Freedman 1984). Daft, Sormunen and Parks (1988) also mentioned that perceived sector
importance translates perceived environmental uncertainty into strategic uncertainty. Essentially, strategic uncertainty reflects the strategic value of environmental information for organizational performance.

The combination of perceived environmental uncertainty and sector importance is expected to generate a need for managers to scan events in selected environmental sectors (Elenkov 1997). As described by Hambrick (1982), environmental scanning is the means through which managers perceive external events and trends and it reduces the strategic uncertainty. According to Daft, Sormunen and Parks (1988), executives can learn about environmental sectors in various ways. They may scan the environment directly or learn from other in the organization. They may increase or decrease the frequency with which they scan, and they may select information among information modes or channels. Scanning frequency is the number of times executives receive data about environment (Hambrick 1981). Scanning mode, on the other hand, is the source or medium through which executives learn about the environment. Since managers have limited time and capacity to evaluate the all information in the environment, they tend to choose among scanning alternatives. In this research, market, technological environment and potential investors were chosen to be inspected and frequency of scanning will be used as a measure to understand the level of firms’ environmental scanning activities. Finally, we hypothesize;

\textbf{H4:} \textit{Novice and experienced firms’ entrepreneurial teams are different with regard to environmental scanning activities.}
In sum, the contribution of this paper therefore will be to show the differences between novice and experienced entrepreneurial teams with regard to entrepreneurial team characteristics, team formation modes, networking, and environmental scanning.

**Research Method**

**The Sample**

The study was conducted in the largest Organized Industrial Site of Bursa, Turkey. SMEs are defined as the economic units that have less than 250 employees and less than 25 million TL net annual sales or financial statement (http://tr.wikipedia.org/wiki/KOBI). A total of 136 companies from different sectors were determined as SMEs using the websites of Bursa Organized Industrial Site and KOSGEB (Small and Medium Industry Development Organization). Although 119 firms agreed to participate, only 77 of them returned the questionnaires. Three of these were eliminated since they were either managed by an individual rather than a team, or most of the questions were left blank. Finally, remaining 74 usable responses indicated a response rate of 62.18%.

Demographic information about entrepreneurial team members were obtained from a single respondent in each firm who was either a top level manager or owner. In literature it is argued that it is justifiable to use organization’s CEO as a single source of information if the firm is small, specialized or not diversified (Bowman, and Ambrosini 1997) More specifically, in the case of SMEs the views of a single respondent may, in fact, reflect those of the firm (Lyon, Lumpkin, and Dess 2000). Carter (2000) also defended use of single source since trying to collect information through multiple response increases cost while lowering response rate. Therefore, we collected information
on team members from a single person (general manager or an owner) from each of the entrepreneurial teams.

The entrepreneurial team is defined as two or more members who were in the firm from early stages like foundation and start-up, contribute with their efforts, ideas, or money, take managerial responsibility, work to the benefit of the firm, feel responsible to one another, as well as those who perceive themselves and are perceived by others as a social entity. Teams were regarded as novice if no member had a prior experience of founding a firm. Teams are considered as experience if at least one member had a prior start-up experience.

The top management teams of the SMEs studied ranged in size from two to twelve members, with average size being 4.04 (SD= 2.49). Totally, there were 299 members in 74 teams.

Measures

As part of the survey, demographic questions such as age, gender and education were asked firstly. Education is measured by number of years of schooling. Two items are used to measure experience; tenure in the company and general employment experience. Type of the firm was asked concerning whether the firm is a producer, seller, exporter or an importer. Firms that operate in more than one category crossed more than one boxes. Lastly, the status of the firm was asked and participants described their companies as sole proprietorship, open partnership, incorporated company, ordinary partnership and limited company.

Entrepreneurial team composition information was obtained from either managers or owners responding to the questionnaire. Questions on how they’ve got acquainted with
team members and number of team members were asked first. Afterwards, for each team member the following information was collected: age, gender, education, tenure in the company, general work experience, and occupation. Team variables that were used in the analyses such as average age, average organizational tenure and average number of years of education were calculated by summing the members’ values and dividing it by the number of members in the teams.

Using Freel’s (2003) instrument, five questions were directed to respondents to learn whether firms involved in networking activities with different stakeholders. Cooperation with customers, suppliers, competitors, universities and public agencies (such as EU, TUBITAK, KOSGEB, government offices, and other supporting agencies) for innovation-related activities are determined by forming binary dummy variables. This question is coded as one if the firms cooperated with their customers for innovation related activities during the last three years; if otherwise they are coded as zero. Same procedure is applied for the questions related with suppliers, competitors, universities and public agencies.

The firms’ environmental scanning activities are measured with nine items using a rating on a seven-point Likert-type scale in which “one” stands for “never used”, “four” stands for “occasionally used” and “seven” stands for “always used” (Henneke, and Lüthje 2007). Of the nine items, four of them are related with the activities to gather market information, three of them are referred to scanning of the technological environment and two of them are associated with the external exploration of funding for the capital required to develop innovative products or processes. These items are obtained from the scales developed by Miller and Friesen (1982) and Crick and Jones (1999).
Cronbach’s $\alpha$ for the environmental scanning scale is $\alpha_{ES} = 0.865$ which is sufficient to support of the reliability of the scale (Nunnally 1978).

**Findings**

**Descriptive Statistics of Firms and Entrepreneurial Teams of Novice and Experienced Firms**

Out of 77 firms, there are 74 SMEs found appropriate for the purpose of this study. The sectorial distribution of firms forming the sample are; 20.3% in textile sector, 28.4% in automotive sector, 10.8% in chemical groups sector, 8.1% in information technologies sector, 8.1% in metal/rubber/packaging sector and 24.3% in other businesses such as construction, printing, heating-cooling systems, logistics and consultancy.

The aim of this research is a comparison of novice and experienced firms’ entrepreneurial teams. The sample involves 41 novices, and 33 experienced small businesses. When the team members are considered, novices have 162 and experienced firms have 128 members. Among these, 217 male, 73 female members in a total of 290 members whose breakdown with respect to the types studied is given in Table 1 below together with other demographics information. The educational level comparisons are of particular interest in that more elementary school graduates are among entrepreneurial team members in novices than that of experienced firms. The entrepreneurial teams of experienced firms are slightly younger (43.09) than experienced firms (44.82) as shown by average ages. Average tenure in company for novices is 10.54 years, whereas it is 11.94 years for experienced teams. Again, average work experience of team members appears slightly lower for novice firms’ teams. However, the comparisons of novice and
experienced teams along average age ($F=0.944$, $\text{sig}=0.334$), organizational tenure average ($F=0.785$, $\text{sig}=0.379$), and average number of years of education ($F=1.996$, $\text{sig}=0.162$) showed no statistically significant differences, therefore H1 is not validated.

Formation of Business Firm and Entrepreneurial Teams

In order to test second hypothesis, we carried out successive tests. We found no difference with regard to activity areas preferred by both types (Table 2). Approximately 44% firms with novice entrepreneurial teams have micro enterprises whereas only 15% of experienced firms have the same size. Two sub-samples are detected to be significantly different with regard to size of firms ($\chi^2=12.552; p<0.05$) as can be seen in Table 3. Novices preferably found micro firms with employees less than and equal to nine. However, experienced teams mostly formed organizations with sizes ranging between 10 and 24. Concerning the legal status of firms, there is no statistically significant difference between two groups (Table 4).
The proportion of different team formation modes in both samples are illustrated in Table 4. More than half of the teams (51.2%) were formed drawing upon family members and friends in novice sample. 36.4% of experienced teams stated that they contain members particularly from family members. Experienced teams are formed among friends in general (27.3%), against 17.1% for novices. Colleagues from prior work are preferred more in novices (22.%) than experienced teams (9.1%) in forming the team. The resulting trust for family members revealed in novices are in consistent with previous research which showed that Turkish SMEs chose their top management team members with whom they have emotional kinship rather than emphasizing professional relations (Westhead, Cowling, and Howorth 2001). Chi-square test carried out shows a significant difference between two types with respect to how the entrepreneurial teams met one another ($\chi^2 = 13.683; p< 0.05$).

Since foundation, half of the entrepreneurial teams underwent changes in membership. Table 6 shows the number of entrepreneurial team members that has
changed since foundation. 41% of the novice teams have changed at least 2 members compared to 21% of experienced teams making the same number of member change.

**Networking**

Respondents’ are asked whether they were engaged in networking with customers, competitors, public sector agencies, universities, and suppliers for innovative activities in the last three years using the questions prepared by Freel (2003). The two groups of entrepreneurial teams studied differed in terms of networking with suppliers whereby experienced entrepreneurial teams cited utilization of supplier networking more strongly ($F=4.075$, $p<0.05$) as shown in Table 7.

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Insert Table 7 approximately here

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**Environmental Scanning in Both Novice and Expert Teams**

Environmental scanning was measured with nine items four of which were related with the activities to gather market information, three were referred to scanning of the technological environment and two were associated with the external exploration of funding for the capital required to develop innovative products or processes (Henneke, and Lüthje 2007). The overall environmental scanning activities significantly differed between two groups ($F=3.881; p<0.10$). It is found that entrepreneurial teams with prior start-up experience revealed more explicit tracking of activities and tactics from competitors, special market research studies, information exchange with academia, and utilized monitoring and surveying to identify potential investors compared to that of novice teams (Table 8).
The overall environmental scanning in novice and experienced teams are found to be statistically different \((F=3.881, p<0.10)\).

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Insert Table 8 approximately here

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**Discussion**

Our way of defining novice and experienced firms differ from the rest in the sense that we defined firms in terms of the experience or inexperience of the current entrepreneurial teams. Since it takes more than two to carry out entrepreneurial activities, the paper contributes to entrepreneurship literature with a new definition of these types. In analysis Chi-square tests are used to test hypothesis. We hypothesized and found significant differences between novice and experienced entrepreneurial teams with respect to firm type, firm size, and an inclination for difference in number of members in the current entrepreneurial teams \((p<0.10)\).

The experienced entrepreneurial teams pay particular attention to networking with suppliers. It is apparent that experienced firms value the enormous impact of suppliers in their performance and thus they are more engaged in networking with suppliers. Supplier linkage may aim developing strategic linkages with suppliers, involving suppliers in design stage in new product introductions, in production planning and management of inventory, developing a rapid response order processing system with suppliers, placing a supplier network that guarantees reliable delivery and exchanging information with suppliers (Lee, Kwon, and Severance 2007). Consequently, supplier relationship has an
important role in determining competitiveness and ultimately, innovative capability (Ramcharran 2001; Lee, Kwon, and Severance 2007) that are critical for survival.

Moreover, nearly half of the experienced firms (14/33) in the sample operate in automotive industry. Our findings concerning the importance given to supplier relations are supported by previous works of Ramcharran (2001) who explored the degree of linkages between automotive parts suppliers and automobile manufacturers. He found significant linkages demonstrated by high correlation coefficients of the P/E (price-to-earnings) ratio of auto parts suppliers and auto manufacturers.

Prior experiences of experienced teams leverage effective information search behavior shown by environmental scanning activities. In line with the arguments in Westhead, Ucbasaran, and Wright (2005) research, experienced teams in our research revealed more engagements in tracking of competitors, market research studies, and exchanging information with academics. Collaboration with universities is critical for small enterprises as it enables them to develop technological knowledge which otherwise cannot be accomplished alone (Bower 1993). It is argued that university research is a source of significant innovation-generating knowledge which diffuses initially through personal contacts of neighboring firms (Acs, FitzRoy, and Smith 1994). Secondly, small firms may fill the internal resource deficiencies by reaching university resources (Westhead, and Storey 1995). Small firms are able to gain access to complicated technology and technical expertise whose direct employment is obstructed by internal resource limitations (Freel 2000). Such potential benefits may increase interest of entrepreneurial teams in what academicians can add to their business.
Experienced firms can be said to have a stronger tendency to engage in monitoring to identify potential investors compared to novices but with a weak significance of difference found. Identifying potential investors may aim finding new partners to the existing business or starting other businesses as in portfolio entrepreneurship. The findings show that business ownership experience in the past increases the information needs as well as information search behavior evident in networking and scanning activities.

Both networking and environmental scanning are strategic activities that influence firm outcomes. In the light of above findings, entrepreneurship programs may be designed to involve themes such as strategic partnerships, networking, and environmental scanning as part of the curriculum. Diverse networks ties enable firms to access information on potential markets and investors. Moreover, networks may also facilitate commercialization of products.

The insights gained from this research are that; with experience entrepreneurial teams develop more concern on social capital. This was evident in networking as well as scanning related engagements which may possibly target elimination of the structural limitations of small size or human capital deficiencies. Such a research identifying demographic intricacies requires more collaboration with Small Business Associations who might collect such data on an ongoing basis.
References


Authors’ Bios

Semra F. Ascigil is an associate professor in the Department of Business Administration at Middle East Technical University in Ankara, Turkey. She teaches business ethics, corporate governance and social responsibility, and quality management in the business administration department. Her areas of research include organizational justice, corporate social responsibility, social capital, and small- and SMEs.

Dilek Tuten is a graduate of MBA program at Department of Business Administration at Middle East Technical University in Ankara, Turkey. She holds chemical engineering degree from the same university. Recently, she is working as a quality system specialist in textile industry.
### Table 1

**Descriptive Statistics by Types of Entrepreneurial Teams**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Novice</th>
<th></th>
<th>%</th>
<th>Experienced</th>
<th></th>
<th>%</th>
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<td><strong>Gender</strong></td>
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<tr>
<td>Male</td>
<td>118</td>
<td>72.8%</td>
<td></td>
<td>99</td>
<td>77.3%</td>
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<tr>
<td>Female</td>
<td>44</td>
<td>27.2%</td>
<td></td>
<td>29</td>
<td>22.7%</td>
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<tr>
<td><strong>Age</strong></td>
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<td></td>
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<tr>
<td>20-30</td>
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<td>9</td>
<td>7.6%</td>
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<td>31-40</td>
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<td>41-50</td>
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<td>28%</td>
<td></td>
<td>35</td>
<td>29.4%</td>
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<tr>
<td>Above 51</td>
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<td>23.3%</td>
<td></td>
<td>35</td>
<td>29.4%</td>
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<td></td>
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<td>Elementary school</td>
<td>34</td>
<td>20.9%</td>
<td></td>
<td>10</td>
<td>7.8%</td>
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<tr>
<td>High school</td>
<td>45</td>
<td>27.8%</td>
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<td>30</td>
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<tr>
<td>Two-year</td>
<td>9</td>
<td>5.6%</td>
<td></td>
<td>20</td>
<td>15.6%</td>
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<tr>
<td>College</td>
<td>62</td>
<td>38.3%</td>
<td></td>
<td>46</td>
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<tr>
<td>Masters</td>
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<tr>
<td>Doctoral</td>
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<td>0%</td>
<td></td>
<td>5</td>
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<tr>
<td><strong>Tenure in the company</strong></td>
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<tr>
<td>0-1 year</td>
<td>8</td>
<td>5.3%</td>
<td></td>
<td>3</td>
<td>2.5%</td>
<td></td>
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<tr>
<td>2-5 years</td>
<td>34</td>
<td>22.7%</td>
<td></td>
<td>37</td>
<td>31.4%</td>
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- Mean = 43.09  
- $SD = 8.32$
- Mean = 44.82  
- $SD = 6.63$
<table>
<thead>
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<th>Age Group</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean</th>
<th>SD</th>
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<td>6-10 years</td>
<td>55</td>
<td>36.7%</td>
<td>10.54</td>
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<tr>
<td>11-15 years</td>
<td>20</td>
<td>13.3%</td>
<td>11.94</td>
<td>6.15</td>
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<td>16-20 years</td>
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<td>More than 21</td>
<td>23</td>
<td>15.3%</td>
<td>17.13</td>
<td>8.56</td>
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</table>

**Tenure in general**

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>0-1 year</td>
<td>0</td>
<td>0%</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>2-5 years</td>
<td>14</td>
<td>9.9%</td>
<td>4.8%</td>
<td></td>
</tr>
<tr>
<td>6-10 years</td>
<td>31</td>
<td>22.0%</td>
<td>13.5%</td>
<td></td>
</tr>
<tr>
<td>11-15 years</td>
<td>28</td>
<td>19.9%</td>
<td>16.3%</td>
<td></td>
</tr>
<tr>
<td>16-20 years</td>
<td>21</td>
<td>14.9%</td>
<td>15.4%</td>
<td></td>
</tr>
<tr>
<td>More than 21</td>
<td>47</td>
<td>33.3%</td>
<td>48.1%</td>
<td></td>
</tr>
</tbody>
</table>

Mean= 17.13  \(SD=8.56\)  Mean=20.67  \(SD=6.58\)
Table 2

Activity Area of Firms by Type

<table>
<thead>
<tr>
<th>Area</th>
<th>Textile</th>
<th>Automotive</th>
<th>Chemical/Pharmaceutical/Cosmetics</th>
<th>IT</th>
<th>Metal/Rubber/Packaging</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novice</td>
<td>18</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Experienced</td>
<td>5</td>
<td>14</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>22</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

$\chi^2$ 7.199

Significance 0.206

Table 3

Size of Firms by Type

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>1-9</th>
<th>10-24</th>
<th>25-49</th>
<th>50-99</th>
<th>100-149</th>
<th>150-250</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novice</td>
<td>18</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>41</td>
</tr>
<tr>
<td>Experienced</td>
<td>5</td>
<td>14</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>22</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>74</td>
</tr>
</tbody>
</table>

$\chi^2$ 12.552

Significance .028
<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Sole Proprietorship</th>
<th>Open Partnership</th>
<th>Corporate Partnership</th>
<th>Limited Partnership</th>
<th>Total</th>
<th>$\chi^2$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novice</td>
<td>6</td>
<td>1</td>
<td>10</td>
<td>24</td>
<td>41</td>
<td>1.785</td>
<td>.62</td>
</tr>
<tr>
<td>Experienced</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>19</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>1</td>
<td>21</td>
<td>43</td>
<td>74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5

Entrepreneurial Team Formation Modes by Types of Entrepreneurial Firms

<table>
<thead>
<tr>
<th>How did team members meet?</th>
<th>Novice</th>
<th>Experienced</th>
<th>$\chi^2$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Friends in general</td>
<td>7</td>
<td>17.1</td>
<td>9</td>
<td>27.3</td>
</tr>
<tr>
<td>Colleagues from prior ventures</td>
<td>9</td>
<td>22.0</td>
<td>3</td>
<td>9.1</td>
</tr>
<tr>
<td>Family members</td>
<td>21</td>
<td>51.2</td>
<td>12</td>
<td>36.4</td>
</tr>
<tr>
<td>Multiple answers</td>
<td>3</td>
<td>7.3</td>
<td>7</td>
<td>21.2</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2.4</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
<td>33</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 6

Changes in Entrepreneurial Team Membership since Foundation

<table>
<thead>
<tr>
<th>Are There Changes in Teams since Foundation?</th>
<th>Novice Teams</th>
<th>Experienced Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>No change</td>
<td>21</td>
<td>51.0</td>
</tr>
<tr>
<td>1 person have changed</td>
<td>3</td>
<td>7.0</td>
</tr>
<tr>
<td>2 persons have changed</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>3 persons have changed</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>4 persons have changed</td>
<td>5</td>
<td>12.0</td>
</tr>
<tr>
<td>5 persons have changed</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>6 persons have changed</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>8 persons have changed</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>9 persons have changed</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10 persons have changed</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Novice</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Network1- Networking with customers</td>
<td>0.73</td>
<td>(0.45)</td>
</tr>
<tr>
<td>Network2- Networking with suppliers</td>
<td>0.68</td>
<td>(0.47)</td>
</tr>
<tr>
<td>Network3- Networking with competitors</td>
<td>0.22</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Network4- Networking with universities</td>
<td>0.20</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Network5- Networking with public agencies</td>
<td>0.29</td>
<td>(0.46)</td>
</tr>
<tr>
<td>Variables</td>
<td>Novice Mean (SD)</td>
<td>Experienced Mean (SD)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Environmental Scanning</td>
<td>4.42 (1.420)</td>
<td>5.04 (1.209)</td>
</tr>
<tr>
<td>Items:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envscan1- routine gathering of opinions from customers</td>
<td>5.78 (1.670)</td>
<td>5.84 (1.500)</td>
</tr>
<tr>
<td>Envscan2- explicit tracking of activities and tactics from competitors</td>
<td>4.86 (2.090)</td>
<td>5.84 (1.440)</td>
</tr>
<tr>
<td>Envscan3- sales forecasting</td>
<td>5.33 (1.900)</td>
<td>5.54 (1.660)</td>
</tr>
<tr>
<td>Envscan4- special market research studies</td>
<td>4.69 (1.880)</td>
<td>5.55 (1.710)</td>
</tr>
<tr>
<td>Envscan5- scientific literature</td>
<td>4.31 (2.060)</td>
<td>4.76 (2.160)</td>
</tr>
<tr>
<td>Envscan6- the knowledge of external industry experts</td>
<td>3.84 (2.100)</td>
<td>4.03 (1.980)</td>
</tr>
<tr>
<td>Envscan7- information exchange with academic researchers</td>
<td>3.03 (1.970)</td>
<td>4.34 (2.120)</td>
</tr>
<tr>
<td>Envscan8- specific monitoring or surveying approaches to identify new potential investors</td>
<td>3.59 (2.100)</td>
<td>4.55 (2.050)</td>
</tr>
<tr>
<td>Envscan9- external financial knowledge in terms of professional advice</td>
<td>4.37</td>
<td>4.88</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>(2.06)</td>
<td>(2.00)</td>
</tr>
</tbody>
</table>
DIFFERENCES BETWEEN TURKISH ENTREPRENEURIAL TEAMS WITH OR WITHOUT START-UP EXPERIENCE

PRINCIPLE TOPIC AND RESEARCH QUESTION

Numerous researches are available in literature exploring the differences between novice and experienced entrepreneurs. Among these, cognitive approaches were employed to find out how they respond to typical decision-making problems when creating a new business (Dew et al, 2008). Baron (2008) also studied two groups and found dissimilar age, life history, educational background, etc. Baron and Henry (2006, 2008) suggested that the experience acquired in time helped entrepreneurs to develop their effective network building skills. Experience entrepreneurs are found to develop partnerships with stakeholders and brought on board more frequently by experienced entrepreneurs. Wiklund and Shepherd (2008) argued that experienced entrepreneurs more often organized subsequent actions by creating independent organizations unlike novice entrepreneurs who are more likely to organize portfolio entrepreneurship within existing firms. These findings are particularly inspirational in exploring the differences in the way these groups establish partnerships.

However, all these above have focused the issue at the individual level. On the other side, the Upper Echelon Theory denoted that top management teams exert a great influence on strategic choice in their organizations and it was argued that the managers’ cognitive bases are the mental guidelines which support their decisions and which accordingly affect the results in their companies (Wiersema and Bantel, 1992; Finkelstein and Hambrick, 1990). The shared cognitions
of team members are also found to influence the company results (Hambrick and Mason, 1984; Wiersema and Bantel, 1992; Knight et al., 1999; Canella et al., 2001; Camelo-Ordaz et al., 2004).

The research question of this paper therefore is “what are the differences between novice and experienced entrepreneurial teams with regard to demographics, networking and environmental scanning activities?”

**METHODOLOGY/KEY PROPOSITION**

SMEs from different sectors located in Bursa formed the sample of the present study. The average age of the companies, sector, size, educational levels, tenure in company, and tenure in general are among the demographics explored. Out of the 74 businesses included in the sample, 41 are identified as novice entrepreneurial team and remaining 33 firms having members in entrepreneurial team with prior start-up experience. In novice teams the average age was 43.09 (SD= 8.32) and in experienced teams the average age was 44.82 (SD=6.63). Members holding graduate degrees are more in novice teams. Females are more in novice teams (27.2%) as compared to experienced teams (22.7%).

The proportion of different team formation modes are also identified in the research.

**Networking in Both Novice and Expert Teams**

Small businesses have limited capacities in terms of resources; therefore, they outsource certain parts of the value chain and cooperate with other economic actors having complementary assets. External linkages have an important role in the acquisition of these assets and identification of innovative opportunities. Hakansson and Snehota (1990) referred to this need for establishing
external networks by saying “no company is an island” and they defined network as “the web of relationships of an organization with identifiable counterparts”. In the research respondents’ were asked whether they have engaged in networking with customers, competitors, public sector agencies, universities, and suppliers for innovative activities in the last three years using the questions prepared by Freel (2003). The two groups of entrepreneurial teams studied differed in terms of networking with suppliers whereby experienced entrepreneurial teams cited utilization of supplier networking (F=4.075, significance=0.047).

**Environmental Scanning in Both Novice and Expert Teams**

In literature it is argued that supplier relationship has an important role in determining competitiveness and ultimately, innovative capability (Ramcharran, 2001; Lee et al., 2007). Environmental scanning was measured with nine items four of which were related with the activities to gather market information, three were referred to scanning of the technological environment and two were associated with the external exploration of funding for the capital required to develop innovative products or processes (Henneke and Lüthje, 2007). The overall environmental scanning activities significantly differed between two groups (F=3.881; significance=0.051). Using comparative techniques, it is found that entrepreneurial teams with prior start-up experience revealed more explicit tracking of activities and tactics from competitors, special market research studies, information exchange with academia, and utilized monitoring and surveying to identify potential investors compared to that of novice teams.

**CONTRIBUTIONS**

The main contribution of this paper is to show the differences between novice and experienced entrepreneurial teams not only with regard to demographics, but extend comparison to networking
and environmental scanning activities that largely determine small business’ innovative capabilities. Since small businesses are important in bringing regional development their role is vital in developing countries like Turkey. The findings have policy implications to government and educators. Moreover, unlike prior research true novice entrepreneurial teams (not MBA students) are used as sample from which the data is collected.
The Social and Environment Responsibility of SMEs Potrait

**Track:** Social, Environmental, and Ethical Responsibility and Sustainability Development on SMEs

The research objective is to analyse social and environmental responsibility among SMEs in Indonesia. It focuses on social and environmental disclosure’s form such as public theme, labor theme, product & service theme and environmental theme. Also average differences of disclosure topics among business types groups are focused.

Survey conducted on SMEs listed at Jakarta SMEs promotion center on October 2009 to Januari 2010. The annual report as secondary data were analysed using content analysed method with Kruskall Wallis’s non parametric statistical to test the average differences disclosure topics within those business types groups.

Based on the test conducted, there are some significant differences among SME groups in disclose environmental and employment, while society and product & service tend to be the same form. Each of groups have a different perceptions about the disclosure topics in their annual report.

Some implications of this research are need to be considere such as methodology, aspect image management and corporate social responsibility emporcement.
Influence of Managerial Accounting Skills and Business Owner Characteristics on the Success and Growth of Small and Medium Enterprises in Kenya.

Abstract
Several studies have shown that most small and medium businesses fail in the first three years. Although a number of factors such as access to funds have been attributed to this failure, the influence of entrepreneurial capability of the business CEO has received little attention from the literature. Therefore the purpose of this paper is to investigate the influence of business owner/manager characteristics such as managerial accounting capabilities, education level, business skills and ICT experience on the success and growth of small and medium enterprises in Kenya.

Methodology
Data will be collected from SMEs in Nairobi through a self administered questionnaire and structured interviews and analyzed using descriptive statistics. In order to maintain comparability with most previous studies, the items of all latent constructs will be measured by 7-point Likert type scales (1 – Very strongly disagree; 7-very strongly agree). The items for the measurement of managerial accounting capabilities, education level, business skills and ICT experience constructs will be adapted from previous studies.

Contributions
The findings are expected to reveal the nature and extent of the influence of the factors on the survival and growth of SMEs in Kenya, and possible interventions that can be practiced by SMEs to mitigate the negative influence that usually result in business failure.

Although findings will be based on perceptions of managers rather than actual impact analysis, the paper is expected to promote development of policy and practice in the SME sector by designing management empowerment and training programs that increase entrepreneurial and managerial capabilities of SME managers in developing economies like Kenya. This will in turn increase the
rate of successful SMEs and consequently their contribution in wealth creation and poverty alleviation. Findings will also be of value to owner/managers in practice and policy making and useful to future researchers.

**Key words:** Small and Medium Enterprises, owner/manager, managerial accounting, business skills, ICT.
FINANCIAL SELF-EFFICACY AMONG WOMEN ENTREPRENEURS

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ABSTRACT

As the number of women businesses owners grows worldwide, it is increasingly important to understand the factors which contribute to their success. While entrepreneurship research identifies access to human and financial capital as being important, fewer studies explore the role of sociocognitive factors such as self-efficacy or confidence in one’s abilities to perform a particular task. This research examines gender-related attitudes toward financial management. The empirical study creates a measure of financial self-efficacy (FSE) and highlights the importance of age and racial differences among women entrepreneurs. It further suggests the need for more research and possible interventions for women entrepreneurs to increase financial self-efficacy.

INTRODUCTION

In 2008 there were an estimated 10.1 million firms that are women majority-owned (50% or more), up from 7.7 million in 2006. According to the Center for Women’s Business Research, women own 20 percent of all firms exceeding $1 million in revenues. (Center for Women’s Business Research, 2008.)
A number of researchers have addressed the success factors for small firms. Less frequently mentioned is the role of sociocognitive factors in the success of small firms. Attitudinal factors include such things as a willingness to embrace the entrepreneurial lifestyle with all its attendant risks, persistence and drive, and probably most important, self-efficacy, i.e., confidence in oneself and one’s own abilities. These are characteristics that emerge in almost any case study of a successful entrepreneur, yet the research literature does very little in the way of defining or measuring these characteristics.

This research focuses on one of those characteristics – the role of self efficacy with regard to financial management - and will explore prior research that may provide insights. Weakness or discomfort in this area of management may translate into neglect of key areas or errors in judgment that can be fatal to the firm. Thus, the key research question address is “How does self-efficacy related to financial management influence entrepreneurial success among women entrepreneurs?”

First, we examine existing research related to financial management self-efficacy in education, cognitive psychology and entrepreneurship. Second, we describe an empirical study examining women entrepreneurs and their attitudes towards math-related topics and financial management. Finally, we discuss the conclusions from this analysis and implications for future research.

LITERATURE REVIEW

Education

Although relatively few articles from prior research specifically address women entrepreneurs’ attitudes toward finance, there are several articles in education that examine the attitudes of girls and women toward quantitative disciplines in general. These reveal that
women’s anxiety about quantitative subjects and lack of confidence in their abilities to deal with quantitative matter begins at a relatively early age. This in turn, influences their performance in quantitative courses, their selection of college major, and their ultimate career choices (Altman, Crothers and Blair, 2007; Jensen and Owen, 2001; Benedict and Hoag, 2002; Ballard and Johnson, 2005; Turner and Bowen, 1999; Correll, 2001; Staniec, 2004; Catalyst, 2000.)

Based on scientific evidence concluding that boys and girls learn differently, advocates propose that single-sex settings can help break down stereotyping at early ages. The goal is to help girls improve their academic performance in math and science and help boys improve their reading and writing (Weil, 2008; Perlman, 2008; Sax, 2005.) However, a separate and contradictory study funded by the National Science Foundation tested seven million students in ten states in the United States and concluded that the gap between boys and girls regarding math scores had closed although the stereotype prevails (Hyde, Lindberg, Linn, Ellis and Williams, 2008.)

**Self-Efficacy**

The term “self-efficacy” was first introduced by Bandura (1977) in social learning theory and refers to one’s confidence in ability to perform a particular task. Ten years later, it was introduced to the organizational behavior literature and was found to be associated with work-related performance, faculty research productivity, career choice, and learning and achievement (Gist and Mitchell, 1992; Gist, 1987.) Self-efficacy and stereotype threat are related in that negative stereotypes may erode confidence (perception of self-efficacy) and create a self-fulfilling prophecy that an individual is incapable of performing a task. In a study of U.S. teens, Marlino and Wilson (2003) found that girls had lower confidence (self-efficacy) in math and
finance than boys. In entrepreneurship research, “entrepreneurial self-efficacy” has been examined and is described in the next section.

**Entrepreneurship**

This phenomenon may be particularly salient as the number of women entrepreneurs continues to grow. While these numbers continue to rise, women owned business are still faced with obstacles such as start-up capital and access to networks. Many researchers question whether or not these obstacles are real or simply negative myths surrounding women entrepreneurs.

A small number of studies have focused specifically on the attitudes of women entrepreneurs toward quantitative tasks, and, in particular, financial skills and financial management (Pellegrino and Reece, 1982; Hisrich and Brush, 1984; Brush, 1991; Jones and Tullous, 2002.)

In a follow-up to the Diana Project, Brush, et al, (2004) address the question “Do women (business owners) have the requisite financial knowledge, skills and experience?” They acknowledge that historically women were less likely to study mathematics, finance and accounting but, contrary to the aforementioned research, they assert that times have changed. Citing 1998 statistics from the National Science Foundation (NSF), there is evidence that female high school graduates were more likely than males to have taken geometry, algebra II and trigonometry, and almost as likely to have taken calculus. They state “The math skills hurdle is one of perception (emphasis added) rather than reality, yet its persistence continues to plague women seeking capital.”

Several studies in entrepreneurship have investigated the relationship between entrepreneurial self-efficacy (ESE) and the intention to start a new venture (Wilson, Kickul,
Marlino, Barbosa, Griffiths, 2009; Barbosa, Gerhardt and Kickul, 2007; Wilson, Kickul and Marlino, 2007; Zhao, Seibert and Hills, 2005; Boyd and Vozikis, 1994.) ESE is a measure of the confidence an individual has in one’s ability to be an entrepreneur. Wilson, Kickul and Marlino (2007) examined the relationships between gender, entrepreneurial self-efficacy and entrepreneurial intentions among adolescents and MBA students. Entrepreneurial self-efficacy was measured with a 6-item self-assessment 5-point Likert scale that included “being able to solve problems,” “making decisions,” “managing money,” “being creative,” “getting people to agree with you,” and “being a leader.”

Given the increased attention toward ESE as an explanatory variable for entrepreneurial intentions, McGee, Peterson, Mueller and Sequeira (2009) further refined the construct by developing a multi-dimensional measure of ESE. The ESE construct is consistent with Bandura’s (1977, 1997) assertion that self-efficacy has greater predictive power when it is domain specific. Few studies have further disaggregated the ESE construct (managerial, marketing, financial, etc.) but there is some research to support that even ESE may be too general and, therefore, less rigorous than concentrating on some of its core dimensions (Barbosa, Gerhardt and Kickul, 2007; Mueller and Goic, 2003.)

**RESEARCH METHODOLOGY**

In this research we disaggregate entrepreneurial self-efficacy by examining the role of self-efficacy in financial management. Our construct corresponds to “managing money” in the Wilson, et al. studies and “implementing financial” items in the McGee et al. ESE construct. To explore the attitudes of women entrepreneurs’ financial management, we collected data via the Internet using SurveyMonkey. The research team attempted to adhere to the principles for constructing Web surveys outlined in Dillman (2000). The survey was initially administered to
several cohorts of women in an entrepreneurship training program, and then a convenience sample of women entrepreneurs. We elected not to collect a comparative male sample since the research objective is to understand women entrepreneurs’ views and not how they compare to men (Ahl, 2006, 2004.) To increase the sample size we utilized the snowball technique by leveraging our professional contacts and networks. Firm-level questions solicited information about how long respondents owned their business, type of business, how they acquired their business, number of employees, annual sales, profitability and sources of funding. Individual-level questions asked for information about the respondents’ financial management skills, attitudes toward quantitative academic courses, and awareness of the perception that women are not proficient in financial management, education, age, and race.

RESULTS

Of the fifty-one respondents, 47.1% owned their businesses for less than 5 years and 63.0% were start-ups. These percentages only include respondents who started their businesses themselves and not with a partner or family member. Three quarters (74.5%) had never owned a business previously, and more than half (53.9%) had no full-time employees other than themselves. Of the thirty-seven respondents who had a business that was up and running 35.3% reported annual sales of $50,000 or less and over a third indicated that their business were profitable. Respondents were primarily split between the following two age groups 40-49 (39.2%) and over 50 (37.3%). Additionally over a third had a graduate degree (39.2%). While the majority of the respondents identified themselves as White over a third of the respondents identified themselves as woman of color (i.e. African American or Hispanic) (35.2%).

Table 1 summarizes responses to an open-ended question regarding attitudes and past experiences with math-related topics and current level of confidence with their financial
management skills. In the anecdotal comments in Table 1, it is noteworthy that many respondents had difficulty with math-related subjects in school, but enjoy the bookkeeping function for their firms. This suggests a disconnect between women’s experience with math-related academic subjects and financial management within the context of their companies. Although several consider finance to be uninteresting and boring, they are confident that they have the ability to learn what they need to know and, if not, they will get outside assistance. The Center for Business Women’s Research states that two-thirds of all women business owners with firms with over $1 million in revenues seek outside assistance for financial advice (Center for Women’s Business Research, 2006).

With regard to rating their skills in financial management, the sample was almost evenly divided into three groups; about a third indicated that this was an area of weakness for them (29.4%), a third indicated that they had adequate skills (33.3%) and slightly less than a third perceived their skills as very good or excellent (31.4%). In evaluating confidence in their financial management skills, about a fifth of the women had no confidence or little confidence (19.6%) while more than a third (35.3%) were confident or very confident with the majority being somewhat confident (45.1%). Moreover, when asked about their confidence regarding their abilities to undertake to the successful financial management of their company slightly over a third of respondents (35.3%) were somewhat confident in their abilities with the majority (60.8%) either confident or very confident in their financial management skills. When asked to describe their attitudes towards quantitative subjects in high school or college, almost half of the
respondents (48.9%) said they avoided them or didn’t like them. Conversely, over a third (34.7%) stated that they enjoyed quantitative subjects and/or took as many as possible. Of the fifty-one respondents over half (68.0%) took care of their family finances alone. Additionally over a fifth (22.0%) participated in this activity with a spouse or partner. Almost two-thirds of the women business owners (60.8%) said they are confident or very confident about their ability to undertake the tasks related to the successful management of their firms.

Correlational analyses were conducted to determine the relationship between the level of firm sales, respondents’ perceived financial management skills, overall financial management skills confidence, confidence in their ability to undertake the financial tasks related to their business, their age and education. As shown in Table 3, findings indicate that age was positively related to respondents’ perception of their financial management skills ($r=.330 \ p<.05$) and confidence in their financial management skills ($r=.320 \ p<.05$) such that older women entrepreneurs were more likely to rate their skills as excellent and more confident in these skills. Age was also significantly related to the amount of years of business experience respondents had prior to owning their business ($r=.380 \ p<.01$). Additionally, all three of the variables asking respondents to comment on their financial management skills were highly correlated with each other.

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| Insert Table 2 here |

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Factor analysis. An exploratory factor analysis was conducted on the variables assessing respondents perception of the financial management skills, (How would you rate your financial skills; How confident do you feel about your skills in financial management; How confident do
you feel regarding your ability to undertake the tasks related to the successful financial management of your company) to determine if the observed correlations could be explained by a smaller number of factors. A principal components extraction was used with a varimax rotation. A one factor solution accounting for 73% of the variance was obtained. Table 3 lists the factor analysis results.

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Insert Table 3 here
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Reliability. Reliability analysis conducted on the three variables indicated a Cronbach’s alpha of .81. Given this strong measure of internal consistency, we created a financial self-efficacy scale where high numbers indicate that the respondents express confidence in their financial management skills.

Comparison of means. One-way analysis of variance (ANOVA) was performed to test whether there is a meaningful difference between respondent’s race and their financial self-efficacy. Results indicated a significant difference between respondents on the financial management skills variable. White women entrepreneurs were more likely to rate their financial management skills higher than respondents of color F (1, 49) = 2.744, p < .10). Additionally, there was a significant difference between financial self-efficacy and age. Older respondents were more likely to rate their financial self-efficacy higher than younger respondents F (2, 48) = 3.747, p < .05). Table 4 lists the ANOVA results.

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Insert Table 4 here
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DISCUSSION

The results in the previous section present several noteworthy findings. First, we developed a robust measure of a financial self-efficacy (FSE) construct which is more task-specific than broadly aggregated constructs of general self-efficacy (GSE) and entrepreneurial self-efficacy (ESE.) Additionally, results suggest that age and racial differences are significantly related to FSE with Caucasians and older respondents reporting higher levels. The differences related to race are consistent with earlier research on self-efficacy and entrepreneurial intentions among teenage girls (Marlino and Wilson, 2003; Wilson, et al, 2009, 2004.)

Taken together, the empirical findings discussed above only partially attest to a lack of confidence combined with anxiety about dealing with financial management on the part of women entrepreneurs. However, this sample represents a limited group of women entrepreneurs participating in an entrepreneurial training program or already owning a business. Participation in such support programs may partially alleviate women’s anxiety regarding the quantitative aspects of management. It should also be noted that the majority of these firms had no employees aside from the entrepreneur herself. Thus, it is very likely that these entrepreneurs faced fewer financial challenges and complexity than would have been the case with larger firms. In the realm of entrepreneurship, anxiety about the quantitative aspects of management and finance may cause women to start small and relatively simple types of businesses having limited opportunities for profitability and growth. Discomfort or lack of experience with financial matters may lead them to avoid seeking external sources of financing such as banks, angel investors, or venture capitalists that would fuel new venture growth. If this is the case, women are truly at a disadvantage.
As noted above, very little research has been done on women entrepreneurs and financial self-efficacy, and our preliminary findings suggest more research needs to be done. Further study of nascent entrepreneurs and actual entrepreneurs would shed light on women’s attitudes toward finance as well as interventions that might help them to be better prepared and increase self-confidence. Some of the obvious interventions might include mentoring relationships, networks and organizations, and training and advisory programs that would help women entrepreneurs develop their financial skills. Even earlier, younger female students should be encouraged to enroll in quantitative classes and advised not to be discouraged if the material is difficult. Female teachers and faculty in quantitative disciplines could serve as role models as could female guest speakers who are either successful entrepreneurs or who play some type of financial role in an entrepreneurial organization. There is also a desperate need for more case studies focusing on women in financial roles in either corporations or entrepreneurial organizations.

In summary, although women are choosing entrepreneurship for a career path, they are not taking advantage of the full range of economic and personal opportunities that it could provide to them until they are willing to launch larger, more complex ventures in high growth industries. More research is needed to determine if this is the case, and if it is, appropriate interventions targeted toward girls and young women are warranted.

AUTHOR BIOS

Dr. Frances M. Amatucci is an Associate Professor at Slippery Rock University of Pennsylvania in the United States. She has served on the Board of the United States Association of Small Business and Entrepreneurship for several years. Her research interests are women and minority-owned businesses, social entrepreneurship, entrepreneurship finance, and innovation.
Dr. Daria C. Crawley is an Associate Professor at Robert Morris University in Pennsylvania. She earned a Ph.D. in Organizational Psychology from the University of Michigan. Her research examines the career experiences of ethnic minority expatriates, the impact of technology on student learning, and issues centering on diversity and pedagogy.

ACKNOWLEDGEMENTS

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BIBLIOGRAPHY


<table>
<thead>
<tr>
<th>Table 1. Attitudes and confidence related to financial management</th>
</tr>
</thead>
<tbody>
<tr>
<td>For some reason I tend to shut down when it comes to worksheets, financial spreadsheet, etc. I don't believe I have a fear of mathematics. I've never really been interested. However, I do realize the importance of good financial management in running a successful business so that is the reason I've joined FastTrac.</td>
</tr>
<tr>
<td>I am an older adult who has recently realized I have a learning difference which most likely caused me to struggle with math in school. I am actually pretty proficient but did poorly in school. My MBA program helped a lot with confidence and competence in financial matters</td>
</tr>
<tr>
<td>I'm &quot;right brained&quot; so, while I manage my records and ledger system, I do rely somewhat on advice/assistance from my husband regarding financial management for my business.</td>
</tr>
<tr>
<td>In high school I didn't care very much for algebra, but I never had a problem with courses involving everyday math, such as bookkeeping or other business courses. As a matter of fact, I really enjoyed bookkeeping.</td>
</tr>
<tr>
<td>Awful; intimidating;</td>
</tr>
<tr>
<td>I love math and math-related subjects. On the other hand, financial management has always been somewhat tedious for me.</td>
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</table>
Table 2. Correlations

<table>
<thead>
<tr>
<th></th>
<th>Level of Firms’ Annual Sales</th>
<th>Years of Experience Prior to Owning business</th>
<th>Financial Management Skills</th>
<th>Confidence in financial management skills</th>
<th>Confidence successful financial management of business</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Firms’ Annual Sales</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Years of Experience Prior to Owning business</td>
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<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Management Skills</td>
<td>.085</td>
<td>.325*</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in financial management skills</td>
<td>.184</td>
<td>.193</td>
<td>.750**</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence successful financial management of business</td>
<td>-.067</td>
<td>-.057</td>
<td>.509**</td>
<td>.516**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.185</td>
<td>.380**</td>
<td>.330*</td>
<td>.320*</td>
<td>.196</td>
<td>1.0</td>
</tr>
<tr>
<td>Education</td>
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<td>-.076</td>
<td>-.179</td>
<td>-.168</td>
<td>-.235</td>
<td>-.259</td>
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</table>

** p<.01  *p<.05

Table 3. Exploratory factor analysis

<table>
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<tr>
<th>Survey Questions</th>
<th>Financial Self-Efficacy</th>
</tr>
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<tr>
<td>How would you rate your skills in financial management?</td>
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</tr>
<tr>
<td>How confident do you feel about your skills in financial management?</td>
<td>.896</td>
</tr>
<tr>
<td>How confident do you feel about your abilities to undertake to the successful financial management of your company?</td>
<td>.770</td>
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Eigenvalue 2.191

Table 4. Analysis of variance results

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.637</td>
<td>5</td>
<td>1.637</td>
<td>1.744</td>
<td>.104</td>
</tr>
<tr>
<td>Within Groups</td>
<td>39.243</td>
<td>49</td>
<td>.597</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Age                       |                |    |             |         |              |
| Between Groups            | 4.170          | 2  | 2.085       | 3.747   | .031**       |
| Within Groups             | 26.710         | 48 | .556        |         |              |

* Significant at the .10 Level (two-tailed)
** Significant at the .05 Level (two-tailed)
FINANCIAL SELF-EFFICACY AMONG WOMEN ENTREPRENEURS

ABSTRACT

Principle Topic and Research Question

As the number of women businesses owners grows worldwide, it is increasingly important to understand the factors which contribute to their success. While entrepreneurship research identifies access to human and financial capital as being important, fewer studies explore the role of sociocognitive factors such as self-efficacy or confidence in one’s abilities to perform a particular task.

This research focuses on self efficacy with regard to financial management - and will explore prior research that may provide insights. Although possibly one of the less glamorous aspects of entrepreneurship, nevertheless, financial management is necessary for the successful launch and operation of a small firm. Weakness or discomfort in this area of management may translate into neglect of key areas or errors in judgment that can be fatal to the firm. Thus, the key research question address is “How does self-efficacy related to financial management influence entrepreneurial success among women entrepreneurs?” This research examines gender-related attitudes toward financial management drawing from existing studies education, cognitive psychology and entrepreneurship.

Research Methodology

To explore the attitudes of women entrepreneurs’ financial management, we collected data via the Internet using SurveyMonkey. The research team attempted to adhere to the principles for constructing Web surveys outlined in Dillman (2000). The survey was initially administered to three FastTrac-NewVenture cohorts of women entrepreneurs, and then a convenience sample of women entrepreneurs. We elected not to collect a comparative male sample since the research objective is to understand women entrepreneurs’ views and not how they compare to men (Ahl, 2006, 2004.) To increase the sample size we utilized the snowball technique by leveraging our professional contacts and networks.
Firm-level questions solicited information about how long respondents owned their business, type of business, how they acquired their business, number of employees, annual sales, profitability and sources of funding. Individual-level questions asked for information about the respondents’ financial management skills, attitudes toward quantitative academic courses, awareness of the perception that women are not proficient in financial management, education, age, and race.

Correlational analyses were conducted to determine the relationship between the level of firm sales, respondents’ perceived financial management skills, overall financial management skills confidence, confidence in their ability to undertake the financial tasks related to their business, their age and education. An exploratory factor analysis was conducted on the variables assessing respondents perception of the financial management skills, (How would you rate your financial skills; How confident do you feel about your skills in financial management; How confident do you feel regarding your ability to undertake the tasks related to the successful financial management of your company) to determine if the observed correlations could be explained by a smaller number of factors. One-way analysis of variance (ANOVA) was performed to test whether there is a meaningful difference between the respondent’s race, age and financial self-efficacy.

**Contribution**

The results present several noteworthy findings. First, we developed a robust measure of a financial self-efficacy (FSE) construct which is more task-specific than broadly aggregated constructs of general self-efficacy (GSE) and entrepreneurial self-efficacy (ESE.) Additionally, results suggest that age and racial differences are
significantly related to FSE with Caucasians and older respondents reporting higher levels. The differences related to race are consistent with earlier research on self-efficacy and entrepreneurial intentions among teenage girls. These findings further suggest the need for more research and possible interventions for women entrepreneurs to increase financial self-efficacy.
START-UP ACTIVITIES AND NEW VENTURE FORMATION AMONG U.S. NASCENT ENTREPRENEURS

Diana M. Hechavarria, University of Cincinnati, USA

ABSTRACT

The process whereby formal organizations emerge from the actions and interactions of entrepreneurs has long held a privileged place in social theory (Ruef, 2003). This study contributes to existing understandings by more thoroughly investigating how team structure and venture type influence entrepreneurs' engagement in start-up activities. Applying the institutional perspective and Weick's theory of organizing enables insight into the influence structural pressures on these early start-up activity choices. This research finds that both new venture type and team structure influence the choice and intensity of start-up activities. Moreover, the data suggest that start-up activities influence new firm founding. As a result, this work may inform nascent entrepreneurs how to successfully emerge from the nascent entrepreneurial process. Findings suggest how entrepreneurs might select the type of new venture and structure of their founding team to raise the probability of success.

Keywords: Nascent entrepreneurship, start-up activities, institutional theory, Weick's theory of organizing, sensemaking

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INTRODUCTION

New firms do not emerge suddenly or spontaneously, but require a great many activities and substantial effort on the part of the start-up team (Reynolds and Curtin, 2008). Individual behaviors are the principal necessary ingredients for organizational formation to occur (Gartner & Carter, 2005). Individuals, in the process of opportunity exploitation, engage in start-up activities, or actions pursued to organize and implement a new firm (Gartner, Carter, and Reynolds, 2004). Specifically, among nascent entrepreneurs, there is considerable evidence that it is what founders actually “do” that is most influential in affecting outcome status (e.g. new firm, quit, or continuing efforts) during the emergence period (Aldrich, 1999; Katz & Gartner, 1988, Shane & Delmar, 2002; Reynolds & Curtin, 2008). Therefore, the objective of this assessment is to understand how contextual features, such as type of firm and start-up team relational structure influence early choices in start-up activities.

In an effort to extend prior findings, this study examines what differences exist among the various relational “structures” of start-up teams (sole proprietor, spouse team, family team, or non-family team) and “firm types” (innovator versus reproducer firms) (Aldrich & Ruef, 2006) in regard to start-up activity execution. For instance, this investigation addresses the questions: Does it take a team or can an individual sustain start-up activities over time despite the challenges and setbacks that are germane to the entrepreneurial process? Is a closer team structure composed of family members better suited to sustaining activity or can a team of non-family colleagues sustain activities that lead to new venture formation just as well? Investigating the impact of team structure, or composition, and firm type will inform practitioners and scholars on how these factors impact start-up behaviors.

Our second area of analysis focuses on the types of activities being pursued. As there are dozens of options in regards to start-up activities, the exact mix depends on the nature of the firm, market, and how the start-up evolves. Furthermore, start-up activities can be developed into numerous typologies and taxonomies (Katz and Gartner, 1988; Carter, Gartner, and Reynolds, 1996; Delmar and Shane, 2003; Liao and Gartner, 2009), depending on the paradigmatic perspective employed. While the fundamental task of organizational creation requires the assembly and coordination of tangible and intangible resources to achieve business objectives, a large number of distinct activities are involved. Some activities are only done once (e.g., opening a bank account, or an EIN application); while other activities may continue for some time (e.g., business plan revisions, financial projection updates, or hiring employees) as the business is established and expands (Gartner, Shaver, Carter, & Reynolds, 2004; Reynolds, 2007; Reynolds & Curtin, 2008). Thus, identifying differences of engagement among classes or groups of activities can shed light on the process of organizational emergence (see Figure 1).

Most of the organizational theories take the existence of organizations for granted. Many attempts to understand success and failure at the nascent firm stage have often been conducted without an underlying theory to explain why some nascent firms succeed in becoming new firms while others do not. This analysis applies the institutional perspective in order to understand how team relational structure, and firm type interrelate in the start-up process to attain legitimacy among those actively involved in the pursuit of a new venture. The strength of the institutional perspective is that it does not have restrictive scope conditions with respect to the rationality of actors, historical time, and level of analysis. It has breadth in the sense that the socially constructed nature of “actors” can be rational individuals or seemingly irrational organizations and their environments (Scott 1987, Scott 1995; Thorton, 1999). Since behavior in organizations is motivated by the context associated with informal as well as formal structures, the institutional paradigm
affords a powerful tool to ground arguments for differences in behaviors among various types of team and firms within the start-up process.

**INSTITUTIONAL THEORY & NASCENT ENTREPRENEURSHIP**

Institutional theory is inherently difficult to explicate, because it taps taken-for-granted assumptions at the core of social action (Zucker, 1987). Institutional theory asserts that normative pressures, both external and internal, are the driving force behind why firms make decisions. These pressures often create *structures*, or patterns and rules for behavior. There are two processes that define *institutional*. First, an organization implements imitative or mimetic structures, adopting others’ successful elements when uncertain about alternatives. Secondly, the organization engages in the normative transmission of social facts, generally from external sources such as the professions (DiMaggio & Powell 1983; Zucker, 1987).

These processes of institutionalization can be formal or informal in nature. Formal structures are the official guidelines, documents or procedures setting out how the organization’s activities are divided and coordinated. Such structures are transmitted via formal rules (e.g., constitutions, laws, economic rules, property rights, and contracts). Informal structures are the undocumented relationships between members of the organization that inevitably emerge as people adapt systems to new conditions and satisfy personal and group needs. Such structures are transmitted via human interaction and relationships (e.g., values, norms, sanctions, taboos, customs, traditions, and codes of conduct).

Meyer and Rowan (1977) argue that the process of institutionalization via formal and informal structures often generates “institutional myths.” There are multiple sources of myths: public opinion, laws, courts, educational systems, etc. Organizations adopt the “vocabularies of structure” prevalent in their environment such as specific job titles, procedures, and organizational rules. These myths are applied and accepted ceremoniously within the organization in order for it to gain or maintain legitimacy in its environment. Legitimacy in the institutional environment helps ensure organizational survival. Therefore, in order to succeed, nascent organizations need to reflect so-called legitimated elements conformed by the social institutions.

In sum, the formal and informal structures of many organizations in postindustrial society dramatically reflect the myths of their institutional environments. Organizations that incorporate societally legitimated rationalized elements in their formal and informal structures maximize their legitimacy and increase their resources and survival capabilities (Meyer and Rowan, 1977). In the case of start-ups, the teams themselves would be an informal source from which these processes of institutionalization would arise. Team structure is an informal element since it captures the nature of undocumented relationships. The early stages of team formation are crucial to the development of the firm. This is because the organizational values will be based on the attributes of its members. Similarly, firm type captures the formal structure of the nascent firm. Thus, firm type serves as a signal to reassure external groups, as well as organizational constituents that the organization is legitimate. Therefore, the structure of relationships and the nature, or type of firm itself, are fundamental to understanding how people interact in a social context toward creating boundaries for a new social entity. In sum, behavior is a function of the particular context in which the actors are embedded (Zucker, 1977; Scott, 2001) and particularly useful to understand start-up activity choices.
START-UP ACTIVITIES AND NEW VENTURE CREATION

Entrepreneurial scholarship has increasingly become more focused on the examination of start-up activities in order to understand the emergence processes for nascent ventures (Gartner, 1988; Gartner and Carter, 2003). Focusing on the activity itself led researchers to look closely for those actively engaged in the start-up processes, nascent entrepreneurs. Among nascent entrepreneurs, conception of the start-up initiative is often measured by the execution of activities aimed to exploit opportunities towards organizational creation. Specific activities linked to organizational conception can include: serious discussion about starting a new organization, the formation of a founding team, public announcements regarding the intention to organize, or the public naming of a new collective identity (Ruef, 2003).

Since the basic task of organizing a new firm requires the coordination of human and financial resources to achieve business objectives, it is understood by scholars and practitioners that a large number of activities are involved (Reynolds, 2007). Reynolds and White (1997) summarize the results of two surveys tracking organizations from conception to adolescence, with each survey addressing no less than seventeen potential startup activities. The survey data suggest considerable diversity in the number of startup activities undertaken by entrepreneurs, the sequencing of activities, and the rates with which these activities are accomplished. Given this variation, the apparent pattern whereby organizations emerge has been referred to as a chaotic and disorderly by many entrepreneurial scholars (Aldrich 1999; Ruef, 2003; Audretsch & Acs, 2003). Thus, the contingent founding process can be characterized in various ways depending on the nature of the theoretical perspective employed.

For example, Katz and Gartner’s (1988) proposed typology of start-up activities, which classifies actions into (1) intentionality, (2) resources, (3) boundary, and (4) exchange relationships. Intentionality is “an agent’s seeking information that can be applied toward achieving the goal of creating a new organization” (Katz & Gartner, 1988, p. 431). Resources are the endowments that the entrepreneur brings to the start-up process, such as personal funds, time, and experience (Brush, Greene, & Hart, 2001). They include human and financial capital, property, and equipment (Katz & Gartner, 1988, p. 432). Boundary is the “barrier condition between the organization and its environment” (Katz & Gartner, 1988, p. 432). It is the space where the organization exerts some control over the resources in its environment. Exchange refers to cycles of transactions that occur within the organization (Katz & Gartner, 1988, p. 432). Katz and Gartner (1988) argue that all four properties are necessary for continuing the organizing effort. Since their original work, many scholars have applied this typology often with minor modifications.

For instance, Delmar and Shane (2002) draw on institutional (Meyer & Rowan, 1977) and evolutionary theories (Schumpeter, 1934) by classifying the various forms of start-up actions in four broad categories: (1) planning, (2) resource transformation, (3) developing marketing relations, and (4) legitimacy garnering. Shane and Delmar (2004) found in there analysis that the earlier planning and legitimating activities were initiated the higher is the probability for the new venture to survive and get established. Their findings emphasize the importance of legitimacy garnering in the new venture creation process.

Subsequently, Ruef (2003), applies an organizational ecological approach (Hannan and Freeman 1989) and categorizes activities along the lines of: (1) initiation, (2) resource mobilization, (3) legal establishment, and (4) social organization. Ruef (2003) suggests a general pattern in which the sequencing of start-up activities and the salience of contextual environmental influences interact with one another. While structural factors affect the timing of start-up activities throughout the founding process, strategic factors are more
relevant early in the sequence (especially, with respect to resource mobilization) and environmental factors become more relevant later in the sequence.

However, when Manolova, Brush, and Edelman (2009) explicitly tested Katz and Gartner’s (1998) typology they found that only three of the four properties were significant: resources, exchange and intentions, and that “boundary” was not significant to continuance of start-up efforts, after controlling for industry, the nascent entrepreneur’s demographic characteristics and human capital. These results also lend support to Ruef’s (2003) finding that environmental activities (e.g. – social organization or boundary activities) become more important later in the start-up process in order to maintain legitimization. Moreover, this also coincides with Delmar and Shane’s (2002) work that finds initiation (or intentionality) influences founding.

Although Katz and Gartner’s approach has proven useful to advance neascent scholarship, our analysis will follow Weick’s (1979) theory of organizing. Weick’s (1979) perspectives views an organization as an ongoing process of sensemaking interactions among individuals. This is because the institutional context is a necessary part of sensemaking (Weber and Glynn, 2006). Therefore, it is an appropriate perspective that aligns fittingly with institutional theory. Institutions prime, edit and trigger sensemaking through formal and informal structures. Moreover, institutions are both antecedent to, and emergent from, sensemaking processes (Weber and Glynn, 2006). Weick (1995: 35) himself calls sensemaking the ‘feedstock for institutionalization’, a view shared by Scott (2001: 96), who sees collective sensemaking activities as early processes in the emergence of new institutions (Weber and Glynn, 2006).

Carter, Gartner, and Reynolds (1996) applied Weick’s (1979) theory of organizing in their analysis of nascent start-up behaviors. Carter, Gartner, and Reynolds(1996) employ an inductive approach to categorize organizing behaviors as (1) discriminating activities, (2) precursor activities, and (3) start-up indicators. Findings from Carter, Gartner, and Reynolds’ (1996) analysis provide evidence that nascent entrepreneurs should aggressively pursue opportunities in the short-term, because they will quickly learn that these opportunities will either reveal themselves as worthy of start-up or as poor choices that should be abandoned. Thus, nascent entrepreneurs need to be keen sensemakers utilizing, perceptions, interpretations and actions to effectively exploit opportunities. As a result, we will categorize activities based on a similar inductive procedure first employed by Carter, Gartner, and Reynolds (1996) as well as Reynolds and Curtin (2009). Through this approach eight distinctive activity classes are identified from our data: (1) business presence activities, (2) product implementation activities, (3) business planning activities, (4) financing activities, (5) sweat equity activities, (6) intellectual property right activities, (7) resource activities, (8) and business registration activities (see Table 1) (Reynolds, 2007).

Business presence activities represent a class of activities that include infrastructural and legal aspects for the emerging venture. Product implementation activities are activities aimed at establishing an refining the product or service being offered. Business planning activities include activities aimed at identifying competitive environment. Financing activities center on items related to asking for and receiving first funding. Sweat equity activities include items around the personal investment of time and funds into the start-up initiative. Intellectual property right activities include items related to the protection of proprietary knowledge. Resource activities include items about the first cash flow and hiring of employees. Finally, business registration activities are related to the start-up contacting legal and national registries to list the business. Therefore, it is hypothesized that:

(H1) New firm emergence is positively influenced by the average percentage of activities
completed within the start-up activity classes of (a) business presence, (b) product implementation, (c) business planning, (d) financing activities, (e) sweat equity activities, (f) intellectual property right activities, (g) resource activities, and (h) business registration.

Although the majority of the prior research discussed controlled for team size, demographic characteristics, and gender, they did not fully explore the role team relationships/structure and venture type as antecedents to start-up activities. Institutions supply a contextual influence for sensemaking activities. Since informal and formal structures are the substance of sensemaking, the relationships among the start-up team members, as well as firm type will likely influence the frame for start-up activity execution. In turn, we can expect considerable variation in the forms of activities being pursued among the various permutations of these two factors. The subsequent discussion will elaborate on how these contextual features help shape the scope of action for nascent entrepreneurs from the institutional sensemaking perspective.

**Firm Type**

Aldrich and Ruef (2006) argue the majority of nascent entrepreneurs start small reproducer rather than innovative organizations. Reproducer organizations are defined as those organizations started in an established population whose routines and competencies vary only minimally if at all, from those of existing organizations (Aldrich and Ruef, 2006). These types of firms bring little to no incremental knowledge to the populations they enter because they organize activities in the same way as their predecessors. Conversely, innovative organizations are those organizations started by entrepreneurs whose routines and competencies vary noticeably from those of existing organizations (Ruef, 2002a; Aldrich and Ruef, 2006).

Innovative organizations face adversity because they typically depart considerably from existing routines and competencies, or their organizational field. Organizational fields are organizations that, in the aggregate, constitute a recognized area of institutional life (e.g., key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products) (DiMaggio and Powell, 1983). For instance, an attempt to combine resources in new ways may be perceived as illegitimate by outsiders, and thus negatively impact the likelihood of new firm founding. Thus, entrepreneurs whose business plans or ideas lie outside scope of understanding within their industry may not gain acceptance. However, some innovative foundings use routines and competencies that vary favorably to the outcome of new firm creation. This is often the case when innovation involves improvements that build on existing routines and competencies within a product/service class and can be adopted by existing organizations, such as process innovations (Aldrich and Ruef, 2006).

Legitimacy can be garnered via conscious assessment, also known as *cognitive legitimacy*. Additionally, legitimacy can also be attained via cultural processes, also known as *sociopolitical legitimacy*. Cognitive legitimacy refers to acceptance of a new kind of ventures as a taken for granted feature of the environment. Sociopolitical legitimacy refers to the acceptance by key stakeholders, the general public, key opinion leaders, and government officials, of a new venture as appropriate and right (Aldrich and Ruef, 2006). Since the types of actions undertaken are crucial in garnering legitimacy, specifically among innovator firms, it is important to investigate and identify differences in various activity classes among nascent entrepreneurs.

From an institutional perspective, the formal structure of reproducer to innovative firms is of critical importance because it influences sensemaking. Depending on the type of innovation, nascent firms need to garner legitimacy at different degrees through various
activities in order to effectively emerge from the founding process. For example, Honig and Karlsson (2004) found that formal structures are important predictors influencing the propensity of new organizations to write business plans. Thus, illustrating how firms attempt to attain legitimacy according to their situational context. Engagement in activities related to property rights, regulatory contracts or social security systems can make the creation of a new firm more attractive or more risky depending on the type of firm. Thus, can expect innovator firms to more readily engage in overall activities than reproducer firms to ensure survival, or new firm emergence. Therefore it is hypothesized that:

(H2) There a relationship between firm type, such that innovator firms will have a higher average percentage of activities completed within the start-up activity classes of (a) business presence, (b) product implementation, (c) business planning, (d) financing activities, (e) sweat equity activities, (f) intellectual property right activities, (g) resource activities, and (h) business registration activities than reproducer firms.

Viewing startup activities as steps toward gaining legitimacy within the environment by continually aligning organizational structure, strategy, and values with institutional norms and expectations, it is of interest to investigate if certain classes of start-up activities are also influenced by team structure.

Team Structure

In addition to a growing interest in the actual behaviors pursued, recent research also reflects a growing attention to the entrepreneurial team, which can be defined as the group of people involved in the creation and management of a new venture (Cooper & Daily, 1997; Kamm, Shuman, Seeger, & Nurick, 1990). There is no question that individuals or teams of individuals are considered to be the major factors that lead to the creation of a "new" venture, product line, or organization. The emergence of a new formal organization invariably entails a decision regarding who will participate and what they will contribute (Aldrich and Ruef, 2006). However, it is the structure of founding teams that may act as an antecedent influencing organizational creation. This is because team structure is an informal element that shapes organizational culture, and thus human behavior in the nascent venture. Consequently, how an organization begins and whether others are recruited to join the effort can have lasting consequences for the organization's survival and performance (Ruef, Aldrich and Carter, 2003).

Within this area of inquiry, Ruef, Aldrich, and Carter (2003) found that the composition of entrepreneurial founding teams reflect the tendency toward gender, ethnic, and occupational homophily in the contemporary United States. In other words, founding teams tend to be very homogenous. Founders are inclined to form teams with members who share similar characteristics along demographic attributes. Reynolds and Curtin (2008) identified that the average team is comprised of about 1.7 nascent entrepreneurs. Yet about 50% of start-ups are actually being implemented by one person. Moreover, among teams, about 45% are a spouse or an intimate pair and another 13-16% involve more than half of the ownership within a single family group. About 40% of start-up teams, or about 20% of all nascent enterprises overall (including sole proprietors), are composed of individuals with no marriage or family relationships.

From the institutional perspective, Zucker (1977) stressed the micro-foundations of institutions, as fundamental to the process by which cultural understandings are communicated to a succession of actors. Thus the team can be a considerable informal structure that drives cognitive beliefs toward behavior. Particularly, among family and spousal teams, legitimization may not be a central driving factor behind start-up activities, because members may perceive the start-up as legitimate among family stakeholders, and in
turn may engage in start-up activities differently than non-family teams and sole proprietors. Therefore, organizational myths and rituals may play a less significant role in directing start-up activities for family and spousal teams. In other words, spousal pairs and family teams perceive themselves as highly cognitively legitimate, and are not as concerned with social political legitimacy. On the contrary, sole proprietors and non-family colleagues are equally concerned with cognitive and social political legitimacy. As a result, it would be of relative importance to learn more about how types of teams complete start-up activities, and if any differences exist among them. Therefore it is hypothesized that:

(H3) There is a relationship between team structure such that sole proprietors and non-family teams will complete a higher average percentage of activities within the start-up activity classes of (a) business presence, (b) product implementation, (c) business planning, (d) financing activities, (e) sweat equity activities, (f) intellectual property right activities, (g) resource activities, and (h) business registration than spousal pairs and family teams.

Firms Type and Team Structure: Formal and Informal Sensemaking

The process of institutional sensemaking described by Weick (2005) can be studied via action. The process of sensemaking is situated in specific social-economic context, specific to each individual nascent firm. Particularly, in the earliest stages of new venture formation, the relationships among founders considerably influences sensemaking. Therefore, we could expect differences between how non-family colleagues attempt to legitimate through action versus a sole proprietor. Again, this the informal structure is crucial component that guides behavior. Formal structures are more explicit, and also guide behavior. Therefore, one can expect innovator firms to be more concerned with garnering legitimacy than reproducer firms. However, if nascent organization is an innovator firm, and seeking to garner legitimacy, does the structure of team also influence what actions are pursued to gain of such legitimacy? Conversely, if an nascent organization is reproducer firm will they more or less likely seek legitimacy according to the team relational structure? If a start-up is a reproducer sole proprietorship, will he/she not be concerned with legitimization because the sole individual deems themselves cognitively legitimate. Or, will they be more concerned with sociopolitical legitimization and thus be more concerned with engage certain activities over others to signal outsiders. In turn, this assessment seeks to determine the character of such relationships. Therefore, it is hypothesized that:

(H4) There a relationship between team structure and firm type such that there are differences in the average percentage of activities completed within the start-up activity classes of (a) business presence, (b) product implementation, (c) business planning, (d) financing activities, (e) sweat equity activities, (f) intellectual property right activities, (g) resource activities, and (h) business registration for each group.

The postulation of these hypothesis will serve as a foundation towards identifying if team structure and firm type influence the context of activity execution of in regards to institutional environments. Identifying such differences will help scholars understand why certain forms of teams and firms would more likely engage in certain classes of activities over others. Moreover, it can help discriminate possible outcome categories for start-ups based on contextual attributes.

**METHODS**

In order to investigate these relationships the Panel Study of Entrepreneurial Dynamics II (PSED II) will be utilized. The PSED II is a detailed longitudinal survey with
information on a cohort of 1,214 individuals that were identified while they were in the process of starting new businesses in 2005. Since most studies of firm organizing activities have been retrospective explorations of the startup behaviors of individuals who are already in business, there is an inherent selection bias that may confound findings. Through examining individuals actively involved in the process of organizing a new firm, our work using the PSED II addresses this selection bias limitation. Furthermore, this analysis will apply techniques univariate and bivariate statistics to describe the sample. Moreover, multivariate statistics such as Kruskal-Wallis test and multinomial logistic regression will be utilized to test the hypotheses.

**Dependent Variables**

*Activity Class.* Activity class is a taxonomic system developed from the PSEDII questionnaire, which provides information on start-up activities. Questions related to start-up actions were utilized to understand the types of behaviors respondents undertook in order to exploit the opportunity of the nascent venture. An inductive approach was employed in order to develop classes of activities. Types of behaviors were grouped into respective classes based on EFA of the PSEDII cohort. Factor analysis is a procedure for determining which activities might be pursued together and considered an interrelated domain of focus (Reynolds, 2007). The analysis indicated eight domains based on 32 start-up activities from PSEDII cohort. Subsequently, for each domain an index was created by computing the average number of total number of activities that had been initiated with in the time period of analysis. For each index the values range from 0-100%. The groups for activity classes are outlined in Table 1, along with respective reliability measures.

*Outcome.* For this assessment outcome status has three possibilities for nascent start-ups. A firm can quit the start-up process, reach new firm status, or continue in the start-up process. A firm is classified as a new firm if the respondents answers that the firm is up and running, and furthermore the ventures has experienced at least 6 months of positive cash flow.

**Independent Variables**

*Team Structure.* Team in a nominal measure that was constructed from the measures in the PSED II data set aimed at capturing the start-up team relational configuration for the prospective new venture. This information is found in section H of the PSED II codebook under “Owner Demographics.” Relational counts were computed for all combinations of start-up teams from information provided based on section H of the PSED II data set. After this procedure was completed a new variable was generated to capture the broad categories of start-up team relational structure. The new variable for team aimed to capture this structure. This variable consists of four broad categories. Individuals who were solely undertaking the start-up initiative were classified as sole proprietors. Teams that had two members and were currently married to each other while undertaking the start-up initiative were classified as spousal pairs. Teams where at least 50% of the group was related in some capacity were classified as family teams. Finally, all other combinations of individuals were classified as non-family teams.

*Business High Tech Index.* In order to measure the degree of innovator versus reproducer firms, three item index was constructed from the PSEDII questionnaire. This scale measure based on EFA of items AS4, AS5, and AS6 of the PSEDII cohort. These items are concerned with the degree of innovative focus for the prospective firm. The questions pertain to whether the product or service was not available five years prior, whether R&D spending is a major priority, and finally whether the founders consider this start-up high tech or not. The business high tech index (Cronbach α=.48) is an additive scale of responses to these questions (1= yes, 0= no). The minimum score is 0, the maximum is 3, and in turn this
construct is as an ordinal scale. In subsequent analysis, this scale is utilized as a dummy variable to facilitate interpreting specific statistical techniques. The median of the sample is utilized as the demarcation for classifying cases as either reproducer (median < 1) or innovator (median >= 1). Moreover, if such is the case, an explication will be made in the subsequent text of this assessment.

**Control Variables**

*Time.* Another factor of interest is time. Because as ventures continue to engage in the start-up process, the intensity of the effort may become a factor that influences the types of actions undertaken, as well as number of actions. As such, the lag in months from conception is utilized as a control measure in subsequent analysis.

*Team Size.* Finally, a factor of interest that may affect the degree of actions and types of actions undertaken is team size. The minimum number is 1, and the maximum amount of team member is 5. Thus, since team size has been used previously a control variable in strategic management research and organizational behavior as well, team size will be used as a control variable in this assessment.

**Sample**

The sample (N=972) for this analysis is drawn from the PSEDII cohort, from which complete case information is available among the variables of interest. From this sample, on average, the sample is about 20 months from conception and on average has two team members. The business high tech index shows that the majority of firms have a low focus towards innovation. For example, fifty-six percent of the cases are considered reproducer firms, while forty-four percent of the cases are considered innovator firms. In regards to classes of start-up activities we find that at about forty to fifty percent of the activities possible to undertake within sweat equity activities, product implementation, and business planning are activity classes have been undertaken (see Table 2). Overall, sixty-three percent of the cases are continuing their start-up efforts, while thirteen percent of cases reached new firm status, and twenty-three percent of cases quit the start-up process. Sole proprietors, represent about fifty-four percent of the cases, thus, sole proprietors undertake the majority of start-up initiatives. Subsequently, followed by spousal pairs at twenty-three percent, and non-family teams representing fifth teen percent of the cases. Finally, family teams represent eight percent of all cases in the sample.

**RESULTS AND ANALYSIS**

Bivariate analysis was completed to identify if multicollinearity was present among the set of interval and continuous measures that are part of this assessment. Findings for this analysis shows that multicollinearity may be an issue (all $r<.8$) that may affect subsequent statistical analysis (see Table 2) between business presence activities and product implementation activities. Moreover, preliminary analysis of Table 3 shows that there are significant positive linear relationship between conception (lag in months) and business presence activities resource activities ($r=.089 p=.007$), product implementation activities ($r=.130 p<.0001$), intellectual property rights activities ($r=.112 p=.001$), sweat equity activities ($r=.083 p=.012$), and business registration activities ($r=.227 p<.0001$). Thus, providing preliminary evidence that conception date may influence the degree of activity engagement. Team size is positively linearly related to business presence activities ($r=.270$.
$p < .0001$), business planning ($r = .083$ $p < .0001$), financing activities ($r = .187$ $p < .0001$), intellectual property right activities ($r = .083$ $p = .012$), resource activities ($r = .017$ $p = .031$), and business registration activities ($r = .135$ $p < .0001$). However, team size is negatively linearly related to sweat equity activities ($r = -.087$ $p = .008$). The business high tech index shows a positive linear relationship to financing activities ($r = -.071$ $p = .031$) and a positive linear relationship to intellectual property rights activities ($r = .236$ $p < .0001$). Among the classes activities we can further infer how these groups may be related to one another through bivariate analysis. For example, all the classes of start-up activities show significant relationships to one another (see Table 2), except sweat equity activities to business planning activities ($r = .015$ $p = .120$), financing activities ($r = .037$ $p = .260$) and property right activities ($r = -.039$ $p = .242$). Moreover, the percentage of participants that were innovator firms did not differ by team structure, $\chi^2(3, 972) = 463$, $p = .201$.

In order to investigate the influence of activity class, on new firm emergence (H1), multinomial logistic regression was utilized. The model fitting criteria (2LL for the overall model) shows a $p <= .0005$, therefore, we reject the null hypothesis that degree of average activities completed makes no difference in predicting the new firm emergence (see Table 3). Results for this analysis are presented in Table 3. The referent category for this analysis is new firm status. Examination of Table 3 in regards to start-up continues versus new firm shows business presence activities ($p = .030$). Therefore, a 1 unit increase in business presence activities decreases by 1% the odds of being in the start-up continues status category, controlling for other variables in the model. Product implementation ($p = .004$) is also a significant, increase in business presence activities decreases by 2% the odds of being in the start-up continues status category rather than new firm category, controlling for other variables in the model. Finally, resource activities ($p < .0001$) significantly influence outcome status, such that nascent ventures who engage in such behaviors will more 2% less likely to be in the continue as start-up compared to new firm category, controlling for other variables in the model. Furthermore, comparing new firms to firms that quit, similar patterns emerge in regards to class of activity engagement. For instance, business presence activities is significant ($p < .0005$), such that increase in business presence activities decreases by 3% the odds of being in the quit category rather than new firm category, controlling for other variables in the model. Finally, product implementation activities ($p = .025$), significantly impact outcome status, such that one unit change business presence planning decreases by 1% the odds of being in the quit category rather than new firm category, controlling for other variables in the model. Therefore, support is found for H1a-b and H1g.

To test if there are differences between reproduce firms and innovator firms in regards to the degree of start-up activities classes engaged (H2) a $t$ test was employed. This method was utilized because it is possible to assess differences among means in regards to types of activities engaged in as well by firm type. The results form this analysis finds, that among nascent entrepreneurs, innovator firms and reproduce firms engage at similar levels among classes of activities, except for intellectual property right activities which shows a significant difference ($t = -5.20$; $d.f. = 629.27$; $p < .0005$) between innovator and reproduce, such that innovators firms are 3.5 times more likely to engage in such activities than reproduce firms. Therefore, support is found for H2f.

In order to test H3, a Kruskal-Wallis and median test was employed to evaluate differences in medians among forms of teams (sole proprietor, spousal pair, family team, and non family team). The median test is a contingency table analysis that involves assessing whether the column variable (the factor) and the row variable (the continuous dependent variable) are related. In other words, the results of the median significance test are identical to those obtained by recasting the data as a two way contingency table and conducting a contingency table analysis using the crosstabs procedure. Moreover, the Kruskal-Wallis test is used when assumptions of ANOVA are not met, which is the case in this assessment since
the dependent variables are not normally distributed. Therefore, this test answers the question if the populations really have the same median. Furthermore, since the analysis for the Kruskal-Wallis test is conducted on ranked scores, the population distributions for the test variable (the scores that the ranks are based on) do not have to be of any particular form (e.g., normal). However, these distributions should be continuous and have identical forms.

A Kruskal-Wallis test was conducted to evaluate the differences among the four categories of team structure on the median completion of activities as a percentage of activities within each respective class. The test, which corrected for tied ranks was significant for seven of the eight activity classes. The results from the analysis are shown in Table 4a-4b. The Kruskal-Wallis test indicates that there is a significant difference in the medians of business presence activities \( \chi^2(3, 972) = 23.56, p < .0005; \eta^2 = .02 \); for product implementation activities \( \chi^2(3, 972) = 11.73, p = .008; \eta^2 = .01 \); for business planning activities \( \chi^2(3, 972) = 20.61, p < .0005; \eta^2 = .02 \); for financing activities \( \chi^2(3, 972) = 19.00, p < .0005; \eta^2 = .02 \); for intellectual property right activities \( \chi^2(3, 972) = 15.94, p = .001; \eta^2 = .02 \); and for resource activities \( \chi^2(3, 972) = 14.90, p = .002; \eta^2 = .02 \) among the various forms of team structure, so no significant difference was found among the sweat equity activities \( \chi^2(3, 972) = 3.53, p = .317 \) and business registration activities \( \chi^2(3, 972) = 4.74, p = .058 \).

Follow-up tests were conducted to evaluate pairwise differences among the four types of teams, controlling for Type I error across tests using Holm’s sequential Bonferroni approach. Between sole proprietors and spousal pairs, significant differences were found in business presence activities \( p = .024 \), product implementation activities \( p = .046 \), and business planning \( p = .012 \). Spousal pair team were more likely to complete a higher percentage of business presence activities, product implementation activities, and business planning activities. Between sole proprietors and family teams, significant differences were found for business presence activities \( p = .010 \), such that family teams were more likely to complete business presence activities than sole proprietors. Finally, for sole proprietors and non-family teams, significant differences were found among business presence activities \( p < .0005 \), business planning activities \( p = .001 \), and financing activities \( p = .020 \). Non-family teams were more likely to complete business presence activities, business planning activities, and financing activities. Between spousal pair and family teams, a significant difference was found for product implementation activities \( p = .013 \). Spousal pairs were more likely to complete a higher degree of product implementation activities. A significant difference was also found between spousal pairs and non-family teams among product implementation activities \( p = .035 \) and business planning activities \( p = .047 \). Spousal pairs were more likely to complete a higher degree of product implementation activities. Conversely, non-family teams were more likely to complete a higher degree of business planning activities. Finally, between family and non-family teams a no significant differences were found. Therefore, there is not complete support for H3a-h.

Subsequently, another Kruskal-Wallis and median test was employed to evaluate differences in medians among groups for H4. In order to complete this test, firm type and team structure were transformed into a single factor, representing the eight combinations of possible firm categories: (1) reproducer sole proprietor, (2) innovator sole proprietor, (3) reproducer spousal pair, (4) innovator spousal pair, (5) reproducer family team, (6) innovator family team, (7) reproducer non-family team, (8) innovator non-family team.

A Kruskal-Wallis test was conducted to evaluate the differences among the eight categories of firm combinations by team structure and firm type on the median completion of activities as a percentage of activities within each respective class. The test, which corrected for tied ranks was significant for six of the eight activity classes. The results from the analysis are shown in Table 5a-5b. The Kruskal-Wallis test indicates that there is a significant difference in the medians of business presence activities; \( \chi^2(7, 972) = 25.17, p = \)
.001; \( \eta^2=0.03 \); for product implementation activities \( \chi^2(7, 972) = 21.13, p = 0.004; \eta^2=0.02 \) for business planning activities \( \chi^2(7, 972) = 23.64, p = 0.001; \eta^2=0.02 \); for financing activities; \( \chi^2(7, 972) = 26.73, p < 0.0005; \eta^2=0.03 \); for intellectual property right activities \( \chi^2(7, 972) = 54.52, p < 0.0005; \eta^2=0.06 \); and for resource activities \( \chi^2(7, 972) = 17.06, p = 0.017; \eta^2=0.02 \). Among the various combinations of firm categories by team structure and firm type. Furthermore, no significant difference was found among the firm categories (team structure by firm type) and sweat equity activities \( (\chi^2(7, 972) = 9.75, p = 0.203) \) and business registration activities \( (\chi^2(7, 972) = 9.01, p = 0.252) \). Therefore, there is sufficient data to conclude that there is a relationship between firm category and the amount of activities completed as a percentage of total activities in each activity class except sweat equity and business registration activities.

Follow up tests were conducted to evaluate pairwise differences among the eight combinations, controlling for Type I error across tests using Holm’s sequential Bonferroni approach. The results indicated a significant difference between the reproducer and innovator sole proprietors for product implementation \( (p=0.031) \) intellectual property right activities \( (p<0.0005) \). Such that innovator sole proprietors where more likely to execute a higher degree of intellectual property right activities than reproducer sole proprietors. Conversely, reproducer sole proprietors will complete a higher degree of product implementation activities than innovator sole proprietors. Similarly, significant differences were also found between reproducer sole proprietors and reproducer spousal pairs among business presence activities \( (p=0.11) \), and financing activities, \( (p=0.056) \), such that reproducer sole proprietors were more likely to execute more action in each respective activity class than reproducer spousal pairs. Between reproducer sole proprietors and innovator spousal pairs, again, intellectual property right activities show that innovator spousal pairs execute more activities in this category \( (p=0.25) \). Moreover, reproducer sole proprietor showed significant differences to reproducer family teams among business presence \( (p=0.052) \), product implementation and \( (p=0.001) \), sweat equity activities \( (p=0.11) \). The data provides evidence that reproducer sole proprietors complete more product implementation and sweat equity activities than reproducer family teams. However, reproducer family teams complete more business presence activities compared to reproducer sole proprietors. Additionally, reproducer sole proprietors show significant differences among intellectual property right activities \( (p=0.002) \) and resource activities \( (p=0.037) \) to innovator family teams. Innovator family teams complete considerably more of these activities than reproducer sole proprietors. The data also provides evidence that there is a significant difference between reproducer sole proprietors and reproducer non-family teams among business presence activities \( (p<0.0001) \), business planning \( (p=0.006) \), financing \( (p<0.0001) \), and resources \( (p<0.0001) \). The data shows the reproducer non-family teams are more likely to complete more business presence, financing, and resource activities, while reproducer sole proprietors are more likely to complete more business planning activities. Finally, between reproducer sole proprietors and innovator non-family teams, significant differences are present in the classes of business planning \( (p=0.027) \), intellectual property rights \( (p<0.0005) \), and resources \( (p=0.046) \). Innovator non-family teams more readily execute activities in the resource, intellectual property class, and reproducer sole proprietors in the business planning activity class.

Likewise, comparing innovator sole proprietors to other forms of teams, similar patterns emerge. Between innovator sole proprietors and reproducer spousal pairs, significant differences are present in the categories of business presence \( (p=0.010) \), product implementation \( (p=0.004) \), business planning \( (p=0.036) \), intellectual property rights \( (p=0.002) \) and business registration activities \( (p=0.046) \). The data shows that reproducer spousal pairs will more readily engage in business presence, product implementation, business planning, and business registration activities than innovator sole proprietors. Conversely, innovator sole proprietors engage in more intellectual property right activities than their counterparts.
Between innovator sole proprietors and innovator spousal pairs, we see significant differences in product implementation (p=.014), business planning (p=.007) and business registration activities (p=.039), such that innovator spousal pairs are more active in each category. Innovator sole proprietors are also significantly different to reproducer family teams in business presence activities (p=.045), product implementation (p=.051), and sweat equity activities (p=.042). Such that innovator sole proprietors complete more sweat equity and product implementation activities than reproducer family firms. However, reproducer family firms complete more business presence activities. Similarly, innovator sole proprietors and innovator family teams show a significant difference for business planning activities (p=.035), such innovator family teams execute more business planning activities than innovator sole proprietors. Additionally, innovator sole proprietors and reproducer non-family teams show significant differences among business presence activities (p<.0005), business planning (p=.001), financing activities (p<.0005), and resource activities (p=.002). The data provides evidence to suggest that reproducer family teams are more likely to complete these activities than innovator sole proprietors. Finally, between innovator sole proprietors and innovator non-family teams, significant differences are found between business planning (p=.003) and intellectual property rights (p=.001) because innovator non-family teams are executing more activities in these classes.

Examining the relationship between reproducer spousal pairs and innovator spousal pairs there are significant differences between the completion of property right activities (p=.017). Innovator spousal pairs are more likely to complete these activities than reproducer spousal pairs. Additionally, between reproducer spousal pairs, and reproducer family teams, significant differences are found for product implementation activities (p=.001), where reproducer spousal pairs are more likely to complete a higher degree of such activities. Furthermore, for reproducer spousal pairs and innovator family teams a significant difference in median ranks is present among the intellectual property activities (p=.002). The data shows that innovator family teams are more likely to engage in these activities over reproducer spousal pairs. Between reproducer spousal pairs and reproducer non-family teams significant differences are found among business planning (p=.034), financing(p=.017), and resource activities (p=.002). Reproducer non-family teams are more likely to complete a higher percentage of activities than reproducer spousal pairs. Finally, among reproducer spousal pairs and innovator non-family teams, the only difference in activity classes is for intellectual property rights (p<.0005), such that innovator non-family teams will complete more activities in this class than reproducer spousal pairs.

Accordingly, between innovator spousal pairs and reproducer family teams significant differences were found among product implementation (p=.001), sweat equity investments (p=.031). Innovator spousal pairs are more likely to complete product implementation activities than reproducer family teams, and reproducer family teams are more likely to complete sweat activities than innovator spousal pairs. However, between innovator spousal pairs and innovator family teams there are no significant differences in the completion rate of activity classes according to median rank. Conversely, reproducer non-family teams are more likely to complete a higher percentage of financing activities (p=.006) versus innovator spousal teams. Finally, among innovator spousal pairs and innovator non-family teams, there is a significant difference in intellectual property right activities (p=.003) such that innovator non-family teams are more likely to complete more activities in this class than innovator spousal pairs.

Comparing reproducer family teams and innovator family teams, the data provides evidence of a significant differences in sweat equity activities (p=.050) and intellectual property right activities (p=.048). Where innovator family teams are more likely to complete activities in these classes versus reproducer family teams. Subsequently, between reproducer family teams and reproducer non-family teams there is a significant difference in
sweat equity activities \((p=.042)\), where reproducer non-family teams are more likely to complete more activities in this class than reproducer family teams. Finally, as one would expect, there is a significant difference between reproducer family teams and innovator non-family teams among intellectual property right activities \((p=.002)\), such that innovator non-family teams more readily engage in this activity class over reproducer family teams.

However, between innovator family teams and reproducer non-family teams, no significant differences are found among activity classes. This is also the case, between innovator family teams and innovator non-family teams. Finally, there is a significant difference between reproducer non-family teams and innovator non-family teams in regards to intellectual property right activities \((p=.001)\), such that innovator non-family teams more readily engage in this activity class over reproducer non-family teams. Therefore, these results provide sufficient evidence to support \(H4a-d\) and \(H4f-g\).

**DISCUSSION**

The findings from this analysis provide preliminary insights into how team structure and firm type may influence activities undertaken in the start-up process, and in turn new firm emergence. Particularly, it was found that business registration, product implementation, and resource activities distinguish new firms from quits and continuing start-up efforts. Consequently, there is initial evidence that certain types of activities can influence new firm emergence more considerably than other activities.

Moreover, the data provides evidence that the context for sensemaking, and subsequently action, is shaped by formal and informal structures. Innovator firms more readily engage in activities related to intellectual property rights versus their reproducer firm counterparts. Sole proprietors, spousal pairs, family businesses, and non-family business differ considerably among business presence, product implementation, business planning, financing, intellectual property right, and resource activities. Spousal pairs engaged in business presence, product implementation, and business planning activities at higher rates than sole proprietors. Spousal pairs also engaged in higher rates of product implementation activities than non-family teams. Also family teams engaged in more business presence activities when compared to sole proprietors. However, non-family teams engaged at higher rates in business planning. No significant differences were found for family teams when compared to non-family teams.

Furthermore, there are differences in the medina rank of the average percentage of activities completed business presence, product implementation, business planning, financing, intellectual property activities and resource as a function of team structure and firm type. No significant differences were found for sweat equity activities and business registration activities as a function of teams structure and firm type. The non-significant findings for sweat equity activities and business registration activities may be a consequence of how the structure of the institutional environment is clearly defined to guide action among entrepreneurial actors. The social and political structure has rules and norms that emergent forms must complete in order to legitimate to the nation-state as an economic entity, and in turn to meet these requirement time and money, or sweat equity investments, are required. However, their is a less explicit guide for how to engage within the other start-up activity classes. Therefore, we can identify tangible differences between the type of team and type of firm and activity class engagement. As a result, the data provides evidence that different team structures and firm types work together to influence the context of start-up actions aimed at garnering legitimacy from outsiders.
The road a start-up takes on its way to emergence never well paved or clearly marked. But for a innovator firm that road can be more treacherous due to new routines that are not pre-established. Therefore, through completion of start-up activities, nascent ventures attempt to legitimate to outsiders their purpose and value through activities. An organization is deemed to be legitimate by the extent to which its means and ends appear to conform to social norms, values and expectations (Dowling & Pfeffer, 1975). Legitimacy is attributed to an organization by its constituents (Perrow, 1970). It helps the organization attract resources (Parsons, 1960), and can be assessed by the level of resource transactions flowing into an organization (Terreberry, 1968). Most importantly for the field of entrepreneurship, legitimacy is a valuable resource which enhances an emerging organization’s odds of survival (Aldrich & Fiol, 1995; Rao, 1994; Singh, Tucker & Meinhard, 1991; Suchman, 1995). This study has found that indeed there are differences among innovator and reproducer firms and team structure in regards to start-up activity completion. For instance, the finding that reproducer sole proprietors and reproduce spousal pairs seem to spend significantly more time business planning than their counterparts may exemplify that smaller teams are more likely to be more meticulous about identifying ways to legitimate, than teams with more members, who can act more quickly to exploit opportunities. Also, it can be that for sole proprietor and spousal reproducer firms the actions needed tp emerge are more explicit than tacit. Supporting Myer and Rowan (1977) argument that firms conform by mimicking legitimate firms are granted legitimacy which enhances the resource flows to the firm and in turn the firm’s chances of survival. Therefore, for smaller reproducer teams omission of business planning can be seen neglectful. Since the omission of some of the prevailing practices and procedures institutionalized by society makes the firm vulnerable to claims it is negligent, irrational or unnecessary and being denied legitimacy (Meyer & Rowan, 1977), and subsequently hindering emergence probabilities for the start-up.

Limitations

There is preliminary evidence that team structure and firm type influences class of start-up activity engagement, but, subsequent analysis of follow-up wave data is need to better comprehend such differences, and identify emerging patterns in activity completion. Also, a weakness of this assessment is that in certain instances the measures constructed show low reliability. Although, EFA analysis was completed by using both PSEDI and the PSEDII cohort to avoid construction of measures that were sample dependent, certain measures in the activity class domain were below the standard conventional Cronbach α=.80. This may be a function of generating measures from an interview schedule, with out having a prior notion about the construction of the desired measures of interest. Therefore, it is recommend that future research within this domain of inquiry pre-test and develop more reliable measures. Resolving these issues will require more information over a longer proportion of the start-up window and must wait until more follow-up interviews are completed. Furthermore, analysis over subsequent waves may also reveal a more nuanced picture of the start-up processes where the degree of engagement and class of activity changes significance based on sequencing of events. Finally, future research should examine more closely smaller windows of start-up periods to examine how tangible formal an informal structures are on start-up activity execution.

Contributions

This research makes four important contributions. First, it extends our understanding of legitimacy by developing a predictive and descriptive model of how firms attempt to gain legitimacy through the execution of start-up activities. Second, we extend prior research by linking legitimacy to a desired organizational outcome, new firm
emergence. Third, we examine the impact of contextual features for firm type and team structure upon individual firms in regards to their legitimization efforts. Finally, we provide nascent entrepreneurs with practical suggestions on actions they might take to maximize their emergence probability during the tenuous start-up phase.

The question of what actions a nascent entrepreneur can take to increase the legitimacy of his particular firm has yet to be addressed in an empirical study. We have identified that business presence and product implementation are the most fundamentally important activities towards legitimacy garnering between firms which reach new firm status versus firms still trying and those who quit. Also, resource activities significantly differentiate those who reach new firm status and those who continue in the start-up phase. Therefore, nascent entrepreneurs should pay careful attention to planning, although it does not significantly influence outcome status, it guides activity appropriately toward legitimacy garnering based on firm structures, as exemplified by reproducer sole proprietors and spousal pairs who engage more readily in these activities.

CONCLUSION

In sum, this research addresses the contextual factors that prompt and sustain start-up activities, and will inform entrepreneurs and scholars about the limitations and advantages of different start-up team relational structures as they relate to different types of new ventures. Insofar as we find relational structures predict both short and longer term activity levels, our research sheds light on the team dynamics and institutional theory literatures as well. Finally, this work provides insights into how teams should be composed so that team members prioritize wisely and sustain activities that lead to new venture formation. Since, there is no one particular way in how organizations emerge because there is no one particular kind of organization that results as an outcome of the start-up processes (Weick, 1979; Gartner, Mitchell, and Vesper, 1989). Research that can both recognize variation in the phenomena of organization creation, while also offering insights into how these diverse activities might lead to patterns of successful formation of organizations is needed and required.


Table 1: PSED II Variables Utilized to Instrument Start-up Activity Classes

<table>
<thead>
<tr>
<th>Variable</th>
<th>PSED II Items</th>
<th>Total number of items</th>
<th>Cronbach Alpha</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Business Presence</td>
<td>AC1; AE11; AG8A_1; AE18; AC5; AE20; AE5; AE22</td>
<td>8</td>
<td>0.71</td>
<td>Legal form registered; Opened bank account for business; Nascent entrepreneurs signed an equity agreement; Hire accountant; Liability insurance bought; Hired lawyer; Supplier credit established; Joined trade association.</td>
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<tr>
<td>Product Implementation</td>
<td>AE13; AD9; AD20; AD6; AE24; AD18; A16</td>
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<td>0.76</td>
<td>First income received; Promotion for product or service initiated; Began talking to customers; Got internet or phone listing; Model or prototype initiated; First use of physical space; Purchase material, supply and/or inventory; Purchased or leased capital assets</td>
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<tr>
<td>Business Planning</td>
<td>AD24; AD22; AD1; AD20; AD28</td>
<td>5</td>
<td>0.66</td>
<td>Defining markets initiated; Began collecting competitor information; Business plan initiated; Financial projections initiated; Determined regulatory requirements</td>
</tr>
<tr>
<td>Asking, Getting Financing</td>
<td>AE1; AE3</td>
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<td>0.88</td>
<td>Asked for first funding; Got first funding</td>
</tr>
<tr>
<td>Personal Investment of Time and Funds</td>
<td>AR1; AH18_1</td>
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<td>0.26</td>
<td>Invested money in start-up; Devoting full-time to start-up</td>
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<tr>
<td>Intellectual Property Rights</td>
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<td>0.42</td>
<td>Patent, trade copy initiated; Proprietary technology fully initiated</td>
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<tr>
<td>Resources (Cash Flow and Hiring)</td>
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<td>First monthly positive cash flow; First person hired</td>
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<td>Business Registration Activities</td>
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<td>0.62</td>
<td>First state unemployment insurance filed, First federal FICA payment; First federal income tax initiated, Known listing in D&amp;B; Filed for federal EIN; Filed for fictitious name (DBA)</td>
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Table 2. Descriptive Statistics and Correlations

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### Table 3. Multinomial Logistic Regression Parameter Estimates

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<th>Start-up Continues</th>
<th>Intercept</th>
<th>Conception Lag (months)</th>
<th>Team Size</th>
<th>Business Presence</th>
<th>Product Implementation</th>
<th>Business Planning</th>
<th>Financing</th>
<th>Sweat Equity</th>
<th>Intellectual Property Rights</th>
<th>Resources</th>
<th>Business Registration</th>
<th>Business Hi-tech (dummy)</th>
<th>Sole Proprietor</th>
<th>Spousal Pair</th>
<th>Family Team</th>
<th>Other Team</th>
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<td></td>
<td>B</td>
<td>Std. Error</td>
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<td>Sig.</td>
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Table 4a. Overall Kruskal-Wallis Test by Team

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<td>40.0000</td>
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<td>20.434</td>
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<td>1.900</td>
<td>15.228</td>
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Table 4b. Median Frequencies by Team Structure

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<th>Spousal Pair</th>
<th>Family Team</th>
<th>Non-Family Team</th>
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<td><strong>Business Presence Activities</strong></td>
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<td>99</td>
<td>37</td>
<td>67</td>
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<tr>
<td></td>
<td>&lt;= Median 359</td>
<td>129</td>
<td>39</td>
<td>76</td>
</tr>
<tr>
<td><strong>Product Implementation Activities</strong></td>
<td>&gt; Median 242</td>
<td>123</td>
<td>31</td>
<td>66</td>
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<tr>
<td></td>
<td>&lt;= Median 283</td>
<td>105</td>
<td>45</td>
<td>77</td>
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<tr>
<td><strong>Business Planning Activities</strong></td>
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<td>103</td>
<td>36</td>
<td>75</td>
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<tr>
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<td>&lt;= Median 345</td>
<td>125</td>
<td>40</td>
<td>68</td>
</tr>
<tr>
<td><strong>Financing Activities</strong></td>
<td>&gt; Median 57</td>
<td>38</td>
<td>11</td>
<td>36</td>
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<tr>
<td></td>
<td>&lt;= Median 468</td>
<td>190</td>
<td>65</td>
<td>107</td>
</tr>
<tr>
<td><strong>Sweat Equity Activities</strong></td>
<td>&gt; Median 138</td>
<td>50</td>
<td>21</td>
<td>35</td>
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<tr>
<td></td>
<td>&lt;= Median 387</td>
<td>178</td>
<td>55</td>
<td>108</td>
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<tr>
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<td></td>
<td>&lt;= Median 485</td>
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<td>69</td>
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<tr>
<td><strong>Resource Activities</strong></td>
<td>&gt; Median 57</td>
<td>32</td>
<td>14</td>
<td>32</td>
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<tr>
<td></td>
<td>&lt;= Median 468</td>
<td>196</td>
<td>62</td>
<td>111</td>
</tr>
<tr>
<td><strong>Business Registration Activities</strong></td>
<td>&gt; Median 176</td>
<td>94</td>
<td>31</td>
<td>57</td>
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<tr>
<td></td>
<td>&lt;= Median 349</td>
<td>134</td>
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<td>Median</td>
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<td>Business Presence Activities</td>
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<td>Innovator Sole Proprietor</td>
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<td>------------------------</td>
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<tr>
<td>&gt; Median</td>
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<td>&lt;= Median</td>
<td>192</td>
<td>167</td>
<td>79</td>
<td>50</td>
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<td>Product Implementation Activities &gt; Median</td>
<td>140</td>
<td>102</td>
<td>75</td>
<td>48</td>
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<tr>
<td>&lt;= Median</td>
<td>144</td>
<td>139</td>
<td>66</td>
<td>39</td>
</tr>
<tr>
<td>Business Planning Activities &gt; Median</td>
<td>106</td>
<td>74</td>
<td>63</td>
<td>40</td>
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<tr>
<td>&lt;= Median</td>
<td>178</td>
<td>167</td>
<td>78</td>
<td>47</td>
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<tr>
<td>Financing Activities        &gt; Median</td>
<td>32</td>
<td>25</td>
<td>26</td>
<td>12</td>
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<tr>
<td>&lt;= Median</td>
<td>252</td>
<td>216</td>
<td>115</td>
<td>75</td>
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<tr>
<td>Sweat Equity Activities     &gt; Median</td>
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<td>64</td>
<td>29</td>
<td>21</td>
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<td>&lt;= Median</td>
<td>210</td>
<td>177</td>
<td>112</td>
<td>66</td>
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<tr>
<td>Intellectual Property Right Activities &gt; Median</td>
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<td>&lt;= Median</td>
<td>273</td>
<td>212</td>
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<td>78</td>
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<td>Resource Activities         &gt; Median</td>
<td>29</td>
<td>28</td>
<td>19</td>
<td>13</td>
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<td>&lt;= Median</td>
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<td>Business Registration Activities &gt; Median</td>
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<tr>
<td>&lt;= Median</td>
<td>183</td>
<td>166</td>
<td>83</td>
<td>51</td>
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Figure 1. Theoretical Model
Effective SME development depends on both strategy and its implementation. Indeed, implementation may be more important than the strategy as strategy is ineffective without implementation. Most SME performance management is financial. However, total business performance depends on more than this, because resources are not only financial, and also because there are complex causal relationships between resources, operations and customers that drive the achievement of an SME’s objectives. The CEO of a medium-sized SME will lead an interactive and practical workshop sharing his experiences on how multi-level performance management can help SMEs to overcome its barriers to growth and performance.
SaaS as a Growth Enabler for SME Software Companies

Lessons Learned from Finnish Software Companies

Software as a Service (SaaS) has been one of the biggest hypes in the software industry during the past few years. SaaS is a business model where the developer offers the software as a hosted service. Customers do not have to care about technical details or software maintenance, and can start using the software with a web browser almost immediately. Other key characteristics usually connected to the SaaS business model are: on-demand nature, scalability, usage based pricing models and reduced need for technology investment- and maintenance costs. Size of the global SaaS business was 6.6. billion dollars in 2009, with a growth rate of even 30% per year.

While a large part of the SaaS market comprises of large well established SaaS providers, the SaaS business provides many opportunities also for SME software companies. There are many SaaS characteristics functioning as factors for growth:

1. The service nature of SaaS products, their scalability and flexibility to customers' needs, and usage based pricing model provide the customers value that typical software products cannot offer.

2. The high "productization" rate of SaaS products, enabling a single SaaS product to cater various customer groups, and the global and immediate sales channel via Internet expand the potential customer base of SaaS products, especially compared to IT services.

3. SaaS model enables efficient one to many service model: single codebase and single instance of a SaaS product serve all its customers. This greatly reduces maintenance cost.
on the provider side, yet providing mass tailoring through parametrization. This lowers the cost per customer, enabling profitable growth for providers and also savings for customers.

4. Focusing on core software offering provided via Internet offers opportunities for provision of true value adding services. This create yet new business opportunities, for example third party service providers to offer the support services lacking from the original offering and, thus, pave way for growth of SaaS-based business ecosystems.

However, SaaS is not a silver bullet. Deep understanding of the SaaS business model and hard work are required to gain the full benefit from the SaaS business model as a growth enabler. An SME who plans to utilize the SaaS business model has also to understand the fundamental requirements and limitations of the business model. Achieving low cost per user is critical in SaaS business, and requires an attitude shift from on-premise model. Also, in many cases the SaaS business model does not only enable but also require growth in terms of large customer base.

In this paper, we present a qualitative study where the SaaS potential of several Finnish SME web-software companies are analyzed. The analysis was done by evaluating the companies' products through their web sites and publicly available product demos. The details of the offering was studied by identifying which growth enabling SaaS characteristics the offering contained. The subjective analysis on the maturity and growth potential of the SaaS offering was also done.

The results of the study show that many of the companies utilize the principles of SaaS when developing their technical product architecture. This allows them to offer the software with usage-based pricing models and with otherwise flexible terms. However, surprisingly large number of
companies were reluctant to give exact information on how to buy the product and what are the pricing terms on their web sites. Based on the analysis, many of the companies do not fully meet the characteristics of the SaaS model and, therefore, have lowered growth potential. This may lead problems when companies grow larger and especially when they enter the international market. The result of the study provides valuable lessons for SME software companies aiming at growing using the SaaS business model.

The paper is part of a larger research project, which aims at analyzing SaaS opportunities for both software vendors and buyers in Finland. The paper uses entrepreneurship/growth literature as basis for analysis for the SaaS literature is almost non-existing in the SME/entrepreneurship field. Therefore, the paper adds to the academic literature in a new research area. Additionally, academic business model literature is rare in entrepreneurship/SME fields. Practical implications can assist existing software SMEs in their growth aspirations and prevent them from making the same mistakes as their predecessors have undergone.
Scaling social impact: An open innovation perspective
by Benedetto Cannatelli and Brett Smith

This paper presents a theoretical model connecting three strategies for spreading social innovation – branching, affiliation and dissemination – to an organization’s confidence in achieving expected social impact and revealing new potential value. To this aim, we leveraged the open innovation paradigm as a theoretical lens to explain how the adoption of porous organizational boundaries affects on the likelihood and magnitude of social value created through scaling. Our model predicts that a strong relationship exists between the adoption of an open organizational structure and the likelihood to reveal potential social value. In addition, the similarity of the context where the social innovation will be scaled moderates this relation. Our paper contributes to the growth of knowledge in the social entrepreneurship field by suggesting new directions for further inquiry and to the extension of the explanatory power of the open innovation paradigm in the social sector.

Keywords: Social entrepreneurship, scaling, value creation, social innovation, open innovation.

Introduction

Scaling social impact has been identified as one of the most important variables within the social entrepreneurship field (Bradach, 2003). According to existing literature on this issue, social entrepreneurs can spread their social innovations to scale-up their impact by adopting different strategies (Taylor, Dees and Emerson, 2001). In particular, previous contributions succeed in relating each strategy to the nature of the innovation and the degree of control exerted by the parent organization on the social solution to be spread (Dees, Anderson and Wei-Skillern, 2004). While scholars have identified different paths to scaling, relatively little is known about the likelihood and magnitude of social value creation through various scaling approaches.
Precisely, what is missing is the extent to which social innovation’s likelihood to fulfill stakeholder expectations and to reveal potential value varies among the different scaling strategies. Understanding how different paths to scaling may affect the likelihood and magnitude of social value creation is important for social entrepreneurs, funders, policy makers and beneficiaries.

In order to address this issue, we recall the notion of open innovation from the technology management field (Chesbrough, 2003). We borrow some constructs that assume central importance within this theory and use them as lens to advance some propositions. In particular, constructs like boundaries permeability (or boundaries openness) and false negatives, constitute useful tools to bridge the degree of control exerted by the parent organization on the social innovation through scaling and the likelihood of revealing potential value.

To bridge this gap we focus on social value as an outcome of the scaling process by addressing two interrelated constructs: expected and potential value creation. Our argument suggests that the extent to which these two sub-dimensions of social value created can be predicted depends on the boundaries permeability of the parent organizations. Hence, social organizations adopting scaling strategies implying high control over the innovation to be spread (consistently to a closed innovation approach) will be more likely to accomplish for expected value but will be less disposed to unmask potential value, as it happens by adopting scaling strategies more prone to open innovation.

In this work we advance some theoretical propositions predicting relationships between scaling strategies and social value in terms of expected and potential value creation. Later on, the mediating effect of the environmental conditions will be introduced to deepen the analysis.
Finally, insights stemming from these propositions will be advanced in the discussion session in order to assess their relevance for the social entrepreneurship field.

**Literature review**

**Scaling impact in the social sector**

In the last decade, the notion of social entrepreneurship has been widely considered as one of the most promising means that human society can put in action to challenge long-standing problems that affect needy communities (Nicholls, 2006). In his seminal work, Dees (1998) defined social entrepreneur as that actor who “plays the role of change agents in the social sector, by: adopting a mission to create and sustain social value (not just private value); recognizing and relentlessly pursuing new opportunities to serve that mission; engaging in a process of continuous innovation, adaptation, and learning; acting boldly without being limited by resources currently in hand; exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.”

Previous research on this filed conceptually positioned social entrepreneurial activities between commercial entrepreneurship and government policies domains (Weerawardena & Sullivan Mort, 2006). On one side, the particular target of customers and the prominent focus on value creation for society rather than on economic value capture for the organization, approaches social entrepreneurship to governmental actions (Peredo & McLean, 2006; Santos, 2009). On the other, the entrepreneurial process that leads social entrepreneurs to opportunity recognition, innovation, resources mobilization and performance measurement draw up it with its commercial counterpart (Mair & Marti’, 2005; Austin, Stevenson & Wei-Skillern, 2006; Zahra, Rawhouser, Bhave, Neubaum, & Hayton, 2008).
As a largely phenomenon-driven research field, social entrepreneurship offers several areas of inquiry and calls for accomplished explanatory approaches from other disciplines, such as organization science, strategy and innovation management (Mair & Marti’, 2005; Peredo & McLean, 2006; Weerawardena & Sullivan Mort, 2006). One of the most relevant topics within the social entrepreneurship domain is the issue of scaling social impact (Bradach, 2003). That is, the entrepreneurial mindset of social organizations leaders often pushes them to spread their social innovations, enhancing their impact to needy communities. According to previous research, two main directions have been detected as viable patterns to scale social impact, namely scaling deep and scaling up (Taylor, Dees and Emerson, 2001). While the first refers mainly to achieve greater penetration of the target client population by improving the quality and the range of the services offered (Taylor, Dees and Emerson, 2001), scaling up pertain those efforts to spread social innovation in dispersed geographical areas, so increasing the number of target beneficiaries around the globe (Dees and Anderson, 2004).

The global-oriented attitude of social entrepreneurship studies field has been probably the main reason that led research focusing primarily on scaling up dynamics, so shifting research efforts from scaling deep. Being well conscious of that, we don’t take exception from the main research stream: even if it is a more beaten track than the deep dimension, we retain that several gaps still exist in the breadth dimension that premise for relevant contributions in expanding knowledge within the field.

Previous research on scaling up can be classified according to three directions. The first stream focused on capabilities required by social organizations to scale up their impact (Bloom & Chatterji, 2009; Bloom and Smith, forthcoming). In these works, authors deductively formulated and empirically tested a model (named SCALERS model) to predict which
capabilities should be developed by social ventures to effectively promote a social change in geographically dispersed areas. The second direction is the one taken by Gregory Dees and others to detect strategies undertaken by social ventures to spread their social innovations to broaden their impact geographically (Taylor, Dees & Emerson, 2001; Bradach, 2003; Dees, Anderson & Wei-Skillern, 2004). In these studies different forms of social innovation – principles, programs and organizational models – are spread among new contexts according to three main strategies – dissemination, affiliation and branching – that differ mainly for the degree of control exerted by the parent organization on the innovation process and on the key elements of the theory of change replied in the new context. The third dimension refers to the interaction between the social organization and the ecosystem in which it is embedded (Bloom & Dees, 2008). To be more precise, this stream of research stands in the social entrepreneurship field independently from the issue of scaling; nevertheless, the ecosystem (or the context) has been considered as a key dimension across capabilities and strategies streams (Bloom & Chatterji, 2009; Bloom & Smith, 2010; Taylor, Dees & Emerson, 2001).

The aim of this paper is to deepen knowledge on strategies and ecosystem streams. More specifically, some theoretical propositions will be advanced to link each scaling strategy – as conceptualized by previous research – to its potential for fulfilling organization’s expectation on value created by spreading social innovation. Indeed, a deeper understanding on how and why different scaling strategies lead to different confidence by the parent organization on value created and for unmasking potential social value in a new context is of great relevance for social ventures looking for spreading their innovation abroad.

In formulating those propositions some paradigms belonging to both the social and commercial entrepreneurship spheres will be recalled as explanatory logic. Among the latter, the
The notion of open innovation assumes a main role as theoretical argument on which connection among constructs is built.

**Open Innovation**

The notion of open innovation was introduced by Henry Chesbrough in his seminal work (2003) to explain successful innovation stories from Silicon Valley. The main idea underlying open innovation is that firms operating in fast developing markets must favor an increasing flow of knowledge across the organizational boundaries to enhance success, by challenging the traditional assumption that “innovation requires control” (Chesbrough, 2003).

By observing how successful firms operating in the information and communication technology ICT industry in the Silicon Valley like Xerox and IBM changed their attitudes in developing and commercializing innovation, he proposed some new assumptions underlying the innovation process in high-technology and high-speed-changing industries. Open innovation was defined by Chesbrough and colleagues (2006) as “... the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively”, has been later on used as a valuable paradigm to explain innovation dynamics in industrial sectors characterized by a less degree of technology, such as chemical, banking and consumer packaged goods (Chesbrough, 2003; Chesbrough & Kardon Crowther, 2006).

Open innovation contributes to the fields of technology and strategic management by suggesting and exploring some elements such as boundary permeability, intermediate innovation markets, active intellectual property management, open business model, inbound and outbound flow of knowledge and innovation ecosystem (Chesbrough, 2003; 2007; Lichtenthaler 2009;
Enkel et al. 2009; Almirall & Casadesus-Masanell, 2010). Among them, some constructs seem promising for the development of knowledge in the social entrepreneurship field, too.

In particular, three reasons can be accounted to justify our attempt. First, its particular focus on value creation rather than just on value capture (Chesbrough, 2007) constitutes an overlapping area with previous research in the social sector (Austin, Stevenson & Wei-Skillern, 2006; Mair & Marti’, 2006; Santos, 2009). Second, approaching innovation at both product and process levels as unit of analysis is consistent with some conceptualizations previously advanced in the social innovation field (Phills Jr, Deiglmeier & Miller, 2008; Dees , Anderson & Wei-Skillern, 2004). Lastly, the notion of “organizational boundaries permeability” or “boundaries openness” (Chesbrough, 2003; Laursen and Salter, 2006) matches the organizational settings underlying most social ventures engaging in spreading innovation strategies.

Indeed, open innovation constitutes by itself a relevant field of inquiry. By adopting it as theoretical lens explaining the relationships that follow, some theoretical contributions to this field also emerge as outcome of this study. In particular, the applicability of the open innovation paradigm to scaling strategies advances knowledge on open innovation in two ways. First, it extends its explanatory power to new sectors characterized mainly by the offering of services rather than products (Gassmann, Enkel & Chesbrough, 2010). Second, by focusing mainly on how the social innovation flows from inside the organization toward external actors, this study responds to the call for further studies to advance knowledge on the outbound process of open innovation (Lichtnthaler, 2009; Gassmann, Enkel & Chesbrough, 2010).
Scaling strategies and value creation

Scaling-up strategies and social innovation

Strategies adopted by social organizations to spread their innovation in geographical dispersed areas constitute the independent variable of the model. Relying on previous studies on scaling social impact, three main strategies – branching, affiliation and dissemination – emerge along a continuum as the most common patterns undertaken by social organizations willing to broaden their social value creation (Taylor, Dees & Emerson, 2001; Bradach, 2003; Dees, Anderson & Wei-Skillern, 2004).

Social innovation has been defined as “a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals” (Phills et al., 2008). The general acceptation of the word “solution” suggests that social innovation can assume different forms according to the theory of change underlying the actions taken by the organization. Consistently, Dees, Anderson & Wei-Skillern (2004) detected three forms that social innovation can assume when spread in new contexts, namely principles, programs and organizational models.

**Branching** – To a higher degree of control over the social innovation to be spread among new contexts, branching strategy is the option that guarantees the higher potential for central coordination and that requires the greatest investment of resources by the central organization (Dees, Anderson & Wei-Skillern, 2004). According to previous works within the domain, branching is intended as the scaling strategy in a strict sense ranging from franchising
agreements to centrally owned branches that share a particular organizational model (Taylor, Dees & Emerson, 2001; Bradach, 2003).

**Affiliation** – This approach – that fall in the middle of the scaling strategies continuum – offers the higher degree of flexibility for replying innovative solutions to social problems. Affiliation assumes the existence of a network of organizations that share principles, learned lessons or programs to enhance impact among different regions (Taylor, Dees and Emerson, 2001). Compared to branching, scaling impact through affiliation strategies implies a lower degree of control over the innovation process (Dees and Anderson, 2004). Another distinction between the two patterns lies in the dynamics according to the innovation is spread: while in branching the innovation is “pushed” by the parent organization toward new contexts, “affiliation” assumes the presence of local actors that “pull” the innovative solution from the original context and reply it to benefit their target community.

**Dissemination** – At the other end of the continuum, operating principles and lessons learned by a social venture through its previous experience are allowed to reach a number of organizations around the globe to suggest suitable patterns to create social impact (Taylor, Dees & Emerson, 2001). Dissemination is the scaling strategy that guarantees the lower degree of control over the social innovation spread: according to this pattern, social actors located all around the world can easily gain access to the innovator knowledge and reply it, similarly to an “open source” approach (Dees, Anderson & Wei-Skillern, 2004).

A key-aspect that is worth highlighting is the extent of control that each strategy exerts on the components of the theory of change that has to be replied through scaling, in particular on the inputs and the activities considered by the innovator to foster social change. The degree to which
control on input and activities is held by the parent organization, impacts seriously on output, outcome and, finally, on value created for target community (Childress, 2008). To notice this interrelationship among components of social organizations’ theory of change is worth as it will be recalled further as supporting element of our model.

**Value created by scaling-up**

Issues related to value orientation have been typically accounted as main source of difference between commercial and social organizations. While some authors advance a distinction between economic and social value (Dees, 1998; Certo & Miller, 2008) – by meaning the former as pertaining the sphere of profit oriented firms and the latter as main goal of the social organizations – others solves such a dichotomy by relying on a trade-off between value capture/appropriation and value creation (Austin, Stevenson, & Wei-Skillern, 2006; Mair & Marti’, 2006).

In the development of this article we rely on the latter distinction. In making this choice, we substantially agree with the arguments brought about by Santos (2009), who suggests that economic value creation is inherently social and that the notion of “social” poses inevitable measurement problems. Instead, relying on the notion of value creation has a two-fold advantage toward the goal of this study. First, such a notion helps building a valuable criterion in drawing a boundary between commercial and social entrepreneurship domains. Second, the notion of value creation is of central importance also in the open innovation paradigm: relying on similar constructs contributes significantly to theory generation in terms of consistence.

The value creation construct is implemented as main dependent variable of our model. Nevertheless, compare to previous theories advanced in the field, we explore two sub-
dimensions that are included in the notion of value creation and that assume great relevance for
the organization management dealing with decisions about scaling impact.

**Confidence on expected value created** – Regardless of the strategy adopted to scale-up its
impact, a social organization holds some expectations on the magnitude of value that will be
created by spreading its social innovation. Whether the scaling process is promoted directly by
the parent organization or is it put in act by a local organization replying a solution that was
successful in another context, the innovator (i.e. the actor that conceived the innovation) aims to
assess in advance to what extent the new target community will benefit from his innovation.
Indeed, this construct refers to the innovator’s expectation on the value to be created by
spreading his social innovation.

**Unmasking potential value created** – As it is replied in new geographical context, a social
innovation is sometimes likely to generate even greater value than in the context in which it was
originally conceived. This is particular relevant to those organizations that aims to foster local
experiments to increase their potential for providing social benefits. When put forward in new
contexts a particular solution can meet even greater consensus and mobilize more resources as it
did in the original context, so revealing a potential elsewhere masked. Unlike confidence on
expected value created, this construct aims to catch to what extent a social innovation – that was
spread through any strategy – is able to exceed the value expected by the innovator.

Confidence on expected value and likelihood for unmasking potential value created vary
according to the strategy adopted to spread social innovation. In the following sections some
theoretical propositions explaining interaction among these variables are formulated and discussed.

**Expected and potential value in branching strategies**

Social organizations scaling their impact by means of branching strategies exert a high degree of control over the innovation process run among the new target community (Dees, Anderson & Wei-Skillern, 2004). Indeed, by successfully replying its organizational model in a new context, a social venture manages to keep under control both the inputs and the activities included in its theory of change, so guaranteeing uniformity in the procedures (Bradach, 2003). Precisely, branching strategies are consistent with the closed innovation paradigm, by privileging the adoption of *impermeable organizational boundaries* to keep direct control on the innovation process (Almirall & Casadesus-Masanell, 2010). Thus, the only way the social innovation can be delivered to the target community is through channels presided or allowed by the parent organization. Low external influence leads to low variance among the inputs considered and the activities put in act in the original and in the new context. It follows that a low gap between the outputs and, finally, the value created is to be expected. So, the first proposition states as follow:

**P1: Spreading social innovation through branching strategies is associated to high confidence on the expected social value created.**

According to the open innovation literature, open and closed innovation paradigms differ substantially in their ability to unmask *false negatives* (Chesbrough, 2003). By that, Chesbrough refers to those technologies that, regardless to their apparent limited potential, reveal an unhoped-for success by being implemented in out-of-target markets by other actors able to foresee the opportunity. In spreading social innovation, unmasking false negatives means
identifying viable inputs or activities in the new context that can increase organization’s theory of change potential for impact. Since branching strategies are characterized by rigid theory of change structures, the likelihood to which different inputs or activities will be taken in consideration is low. Hence, control exerted over the social innovation process through branching strategies prevents social organizations considering different inputs and activities available in the new context to generate a greater impact. Consequently, proposition # 2 states:

**P2:** *Spreading social innovation through branching strategies is associated to a limited likelihood of unmasking potential social value.*

**Expected and potential value in dissemination strategies**

Whereas branching strategies imply a closed innovation attitude, dissemination strategies respond to an open innovation paradigm. According to open innovation, organizations adopt *porous organizational boundaries* reducing control over the innovation process (Chesbrough, 2003). In dissemination, a social venture allows external (not being part of the original organization) actors access to its innovation process and autonomy in implementing the innovation in a new context (Dees, Anderson & Wei-Skillern, 2004). This way, the effectiveness of the social innovation strictly depends on how the elements (input-activities-output) of the new organization’s theory of change are close to the original. Low control on the social process by the parent organization increases uncertainty on how innovation will be used by the new provider. Consequently, variance of outcome and social impact created is widened, reducing the degree of confidence on the expected social value. Hence, proposition # 3 states:

**P3:** *Spreading social innovation through dissemination strategies is associated to low confidence on the expected social value.*
Consistent with open innovation, dissemination strategies imply low control over the innovation process. Open innovation challenges the traditional assumption that successful innovation requires control by acknowledging that “not all the smart people work for us” (Chesbrough, 2003). It follows that probabilities to unmask false negatives are high if people from outside the organization get access to internal knowledge. In fact, by allowing external actors implement social innovation autonomously, there is high probability that even different inputs and activities that are viable in the new context will be considered and implemented in the original theory of change increasing its outcome and its impact. The wider variance of outcome and social impact expected allows for exceeding desired social value. So, proposition # 4 states:

P4: Spreading social innovation through dissemination strategies is associated to a high likelihood of unmasking potential social value.

Lastly, affiliation strategy for scaling impact contains a wide range of viable patterns that differ in the strength of the relationships between the innovator and the entities implementing the social innovation in the new areas. Precisely, social organizations aiming to scale-up their impact through affiliation usually rely on inter-organizational networks to deliver successfully their innovations (Taylor, Dees & Emerson, 2001). Presiding over a network allows the innovator to exert control over network members to a lesser degree than it happens in branching strategies. In particular, information flowing within the network is likely to foster homogeneity between organizations with regard to the activities led but it can afford less control over the input selection process, given the absence of rigid mechanisms in loco to guarantee uniformity. On the other side of the coin, adopting porous organizational boundaries opens for a higher likelihood for unmasking potential value. Affiliation should be hence positioned in between branching and
dissemination strategies with regard to both confidence on expected value and likelihood for unmasking potential value.

<table>
<thead>
<tr>
<th>Spreading strategy</th>
<th>Control on input</th>
<th>Control on activities</th>
<th>Variance around the expected value</th>
<th>Confidence on the expected value</th>
<th>Likelihood for unmasking potential value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branching</td>
<td>high</td>
<td>high</td>
<td>low</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Affiliation</td>
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<td>high</td>
<td>medium</td>
<td>medium</td>
<td>medium</td>
</tr>
<tr>
<td>Dissemination</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>high</td>
</tr>
</tbody>
</table>

Table 1 Scaling strategies and expected/potential value

In summary, effectiveness of scaling patterns strictly depends on the degree of control that the innovator aims to keep on the innovation and the goal that he aims to achieve through value creation. Indeed, figure 1 synthesized dissemination, affiliation and branching attitude toward expected and potential value. In particular, it can be easily detected that, assuming neutral propensity toward expected and potential value, a social organization will chose its strategy – among the x axis – that maximizes the sum ($Y_1 + Y_2$), that is the amount of value created.

![Figure 1 Scaling strategies and expected-potential value creation](image)
Environmental conditions as moderator variables of the model

The model illustrated until now predicts how the strategy undertaken by a social organization is likely to fill expectations on the magnitude of value created through spreading its social innovation.

Nevertheless, scaling social impact implies dealing with external conditions that vary – even significantly – among different environments (Alvord, Brown & Letts, 2004; Smith & Stevens, forthcoming). As consequence of their hybrid nature – standing in between the entrepreneurship and the social domain – a social innovation spread in a new geographical area must be consistent with different settings that depend from political, economic, geographical and cultural dimensions (Bloom & Dees, 2008).

Political conditions – Policy exerts influence on suitability of a social innovation by shaping the opportunity structures in a particular region (Marquis & Huang, 2009). In particular, by settling regulatory effects on entry, exit and market structure it contributes in defining to what extent a particular need can be satisfied by traditional market mechanisms (Wholey & Sanchez, 1991). Indeed, by stating rules, regulations and public support, policy shapes the boundaries of the domain in which the social entrepreneur operates.

Economic conditions – Economic contingencies affect the extent to which a social solution is valuable in a given context as they determine if a particular service can be delivered to the customers without compromising organization’s financial sustainability (Dees & Bloom, 2008). For example, community’s income per capita is an economic condition that decides on the potential of success of the service provided (Nohria, Dyer & Daltzell, 2002).

Geographical conditions – Geographical location plays a relevant role in assessing solutions implementation across different areas. Geographic dimension affects entrepreneurial behavior by
determining to what extent it is seen as being at work for society (Steyaert & Katz, 2004; Smith & Stevenson, forthcoming). Moreover, conditions of existing infrastructures play a key-role in determining service deliverability and usefulness (Dees & Bloom, 2008).

**Cultural conditions** – Cultural factors influence organizational and forms (Marquis & Huang, 2009). Several studies have been conducted to demonstrate how organizations tend to embody the institution in which they are embedded (Haveman & Rao, 1997; Haveman, Rao & Paruchuri, 2007). In particular, in his seminal work, Hofstede detected how four sub-dimension of culture influence organizational structure and motivation of people within organizations (Hofstede, 1980).

When a social organization evaluates scaling strategies by spreading its social innovation, it must consider in advance to what extent the new target context presents similarities to the ecosystem in which the innovation was originally conceived. According to the political, economical, geographical and cultural settings, a target area can be more or less supportive to run a particular theory of change. Such variability is taken into account in our model by introducing the *context similarity* construct.

Precisely, low similarity between the original and the new target context imply a significant difference in the inputs available to run and support the innovation. Whether such diversity in input availability leads to an apparently more supportive or more restrictive environment, low context similarity reduces innovator’s capability of control over the components of the theory of change, regardless of the spreading strategy adopted. In fact, low context similarity has a significant effect on widening variance among the expected value created for society through scaling. This is particularly relevant, especially for branching strategies as it exerts a moderating
effect by lowering confidence on the expected value created. Thus, proposition # 5 states as follow:

*P5: Low similarity between the original and the new target context reduces the confidence on the social value expected through branching strategies.*

![Figure 2 Scaling strategies and expected-potential value creation – Low context similarity](image)

On the other side of the coin, the moderating effect of a high context similarity should be explored. In particular, the extent to which a social innovation benefits (i.e. generates more social value than expected) from an open innovation process depends largely on the likelihood new users replay it by implementing new inputs and activities that can increase outcome and social impact. Assuming that the innovator is close to maximize value created upon the original context, there are low probabilities for new users to exceed desired social impact if there are not supplementary viable inputs and activities in the new context. So, similarity between the original and the new context moderates the extent to which new users can “do better” than the original organization. It follows that, when political, economical, geographical and cultural conditions
among the two contexts converge, dissemination strategy’s power for unmasking potential value is significantly reduced:

\[ P6: \text{High similarity between the original and the new target context reduces dissemination strategies’ likelihood for unmasking potential value.} \]

As represented in figures 2 and 3, context similarity influences organization’s decision making with regard to the scaling strategy to be pursued. In particular, as political, economic, geographical and cultural conditions diverge between the original and the new setting, branching strategies are likely to decrease their power for delivering the social value expected. This contingency challenges particularly those organizations planning to scale-up their impact internationally, for example in developing countries where different religions and cultural background can engender different reaction to the solution proposed. Or, again, it could be the case of an innovation to be scaled in developed regions in which political legislations in force commit themselves to significant different degrees to support that cause. In this case the amount
of value that could be created \((Y_1 + Y_2)\) is likely to be maximized relying on more open strategies: by empowering local actors through dissemination or affiliation, potential value can be easily unmasked by implementing new inputs and activities in the theory of change.

As anticipated, the choice concerning the scaling strategy to be adopted could change radically when the new target context presents similarities with the one in which the innovation was originally conceived. The availability of inputs overlapping those of the original context reduces the likelihood that more powerful solutions to the same social problem could be designed through the same innovation. It follows that giving up control over the innovation could breed no advantages, reducing attractiveness of open strategies. Graphics 3 shows how value created \((Y_1 + Y_2)\) is significantly low upon dissemination strategies due to the flattering of the likelihood for unmasking potential value function.

**Discussion**

The propositions advanced in the previous section suggest a relationship between the level of control exerted by the parent organization on the social innovation and the confidence on expected and potential value creation. Indeed, similarity of the context to be reached through scaling must be taken into account as it affects each strategy attitude toward value creation by moderating such relations.

Awareness of such relations assumes primary relevance in the field of social entrepreneurship as they predict the extent to which stakeholder expectations of social impact likelihood and maximization can be successfully fulfilled. In fact, as a social organization attempts maximizing its social impact through scaling, it is of critical importance for it evaluating the spreading innovation process to assess effectiveness of its plan.
Expected and potential values lend themselves to different degrees of measurability. While expected value is likely to be forecasted and, consequently, stakeholders may already hold suitable tools to measure its social value, the nature of the potential value created can often not be accurately predicted in advance.

This issue leads to problems in assessing correctly the impact exerted through scaling. This is particularly true for scaling strategies close to the dissemination end of the continuum, where the innovation is handled by local organizations and the control exerted by the parent organization is limited. In these situations, organizations spreading their impact through dissemination should also develop open measurement scales that can be shared and co-developed with the local organizations running the innovation in new contexts. That is: when adopting porous boundaries an open approach is needed also at the measurement level in order to correctly account for the whole impact created. On the contrary, scaling plans implying strong control over the social solution – like branching strategies – often results in outcomes that can be easily assessed through standard measurements already developed and tested by the innovator. Accordingly, effective and proven measurement techniques will be adopted by each branch.

The extent to which social impact generated is predictable and measurable assumes great significance also at the funding level: social organizations relying – even partially – on donations and grants usually need to present their desired social impact to potential funders willing to assess in advance the social return on their investment. As consequence of the low predictability of the open innovation outcome, social entrepreneurs adopting dissemination strategies could face some difficulties in effectively communicating their potential impact to potential investors. On the other side, social organizations relying on more closed strategies would face fewer
constraints planning a detailed social return on their investment but may face unique challenges in offering sufficient social value potential to investors who are trying to change the world.

However, investors’ decisions to finance a scaling project do not depend only on predictability and measurability of the impact, but also on its magnitude. Indeed, when investors’ attitude to risk increases – so that, they are willing to assume a greater amount of risk for a higher potential return – dissemination could be a preferable option than branching strategies: this is the case of well-recognised curses that affect society to a great extent (for example AIDS/HIV), for which solutions need to release a great extent of value to be effective. In addition to that, it must be underlined that social organizations depending on open innovation can rely on funding streams activated by local organizations implementing their innovation. This way, they lighten the burden of liabilities of the central organization. The choice between strategies at the two ends of the continuum strictly depends on the nature of the social innovation to be spread, to the goals that stakeholders aim to achieve and, as predicted by proposition 5 and 6 by the similarity of the context to be reached. In fact, context similarity has to be taken into account to deal effectively with both measurement and funding issues, as they mitigate in turn benefits of both branching and dissemination strategies.

Recalling the notions of boundaries permeability and false negatives was critical to explain relationship between scaling strategies and the two dimension of value creation. However, we acknowledge that the open innovation paradigm could still provide contributions to the social entrepreneurship field at different level of analysis. First, in our argument we focused just on scaling-up strategies without addressing mechanisms related to scaling deep strategies. Research questions in this stream would need to address questions like: which role open and closed innovations play in scaling deep strategies? How do they affect predictability of expected and
potential value? Which factors do moderate these relations? Second, in our work we discussed open innovation mainly as outbound process – that is, dynamics according to innovations flow out of the organizations boundaries to be implemented and developed by other actors. In other words, we stood just from the innovator perspective (the one who conceived the innovation and share it with others): how do open innovation works when intended as strategy to embody knowledge coming from the external environment? Under which conditions local organizations and start-up social ventures can benefit by opening their boundaries to implement successful social innovations in their context? Third, even if we concentrate mainly on value creation, open innovation offers interesting insights on how a balance between value capture and value creation can be achieved: how this balance can be reached in the social field? How can it be useful for those organizations struggling to achieve financial sustainability? Lastly, in our work we explore the consequence of the adoption of porous boundaries: further studies could focus on this construct as dependent variable: this would be particularly important to detect motives that lead to the adoption of open innovation in the social field: are these the same as in the commercial entrepreneurship field? Under which points are they similar? To what extent they differ? Such a study would contribute to the field of entrepreneurship by highlighting connections between its commercial and social modes.

**Conclusion**

This paper advanced theory on social entrepreneurship by formulating ten propositions linking three viable strategies for scaling social impact – namely, branching, affiliation and dissemination – with their propensity to emphasize expected and potential value creation. Precisely, two main contributions emerge as direct outcome of this study.
First, a model explaining how different strategies for spreading social innovation fulfill the organization’s priority in terms of expectation on value created has been developed. Moreover, by introducing context similarity as mediator variable it has been possible to predict under which situation the three strategies maximize their potential for value creation. These findings have great significance in terms of contribution to social organizations management.

Second, some constructs that assume a key-role in this model like organizational boundary permeability, external control over the innovation process and potential for unmasking value creation are borrowed from the idea of open innovation. Even if without taking into account all the constructs underlying the original model, this study contribute to open innovation by extending its explanatory domain to social entrepreneurship.

Lastly, we are well conscious that this model is far from being exhaustive of the factors that have to be taken into account for formulating successful scaling strategies: nevertheless we hope that it can be useful to suggest a prominent direction for further contributions to the field.
References


IDENTIFICATION, POSITIONING AND PERFORMANCE EVALUATION OF TOURISM CLUSTERS: THE CASE OF PORTUGAL

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Abstract
Tourism with a truly strategic importance it has for any future national or regional economy, together with the reasons justifying the immense interest in the area of clusters and their assumed impact on corporate economic performance seems to justify the fundamental need to investigate this issue. Given the recent changes to the law of tourism areas, this study aims to identify and map clusters of tourism in Portugal, as well as evaluate their performance. Based on a multivariate analysis, three clusters were identified with different performance levels: low, medium and high performance.

Keywords: Tourism, Clusters, Mapping, Economic Performance, Portugal.

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1. Introduction

Tourism is recognized as one of today’s most important economic and social phenomena. In this millennium, is this sector a structuring element of the dynamics of global economy, so that it has been affirmed as a sector of bigger importance and spread world-wide (PITER, 2005).

*NECE / Research supported by: Programa de Financiamento Plurianual das Unidades de I&D da FCT - Fundação para a Ciência e Tecnologia, Ministério da Ciência, Tecnologia e Ensino Superior, Portugal.*
According to Confederation of Portuguese Tourism - CTP (2005), the tourism sector registered in the last few decades, in the whole world, a significant increase, assuming an increasing importance in the global economy and consisting a structuring element of its dynamics. At the beginning of this century, tourism represented, in Portugal, about 10 percent of the Gross National Product and shows as a sector-key in the transformation of the national economy. Opperman (1993) states that at regional level is this sector presented as an essential tool in the development and regional economic growth, believing to be a weapon to prevent the desertification and the economic stagnation of the regions, namely in the interior. In this perspective, the competitiveness contributes largely for the construction of social, cultural and economic variable that affects the performance of a country in international markets.

Wealth creation is the engine of economic growth and an important lever of innovation (Dwyer and Kim, 2003). For Dwyer et al. (2004), competitiveness of a nation is not a proper result, but a way to reach an end, a final aim of industry development to increase people’s wealth. Due to the great unanimity that clusters increase competitiveness (Porter, 1990; Porter, 2002; Rocha 2004) and innovative capacity (Baptista and Swan, 1998; Nordin, 2003; Sölvell et al., 2006; Hospers et al., 2009) of a regional industry and due that tourism constitutes a powerful instrument of regional development (Engelstoft et al., 2006; Santos, 2007) are pertinent and crucial to argue the paper of clusters in the tourism sector. The discussion about tourism clusters is still in an embryonic phase (Rosenfeld, 1997; Nordin, 2003; Capone, 2004), justifying the reduced number of inquiries that approach that problematic. Perhaps therefore, is the concept of cluster frequently criticized for having a vague and not universal definition (Martin and Sunley, 2003; Asheim et al., 2006). Most of the cases the existence of cluster is anecdotally evaluated and only based way on case studies without any support methodology (Engelstoft et al., 2006).

The mapping of clusters, the creation of systematic data sets on the presence of clusters through many regions, allowed the accomplishment of systematic tests of the relations between clusters and the economic performance (Porter, 2003; Folta et al., 2006; Gilbert et al., 2007; Porter et al., 2007). The effects of clusters in the performance of a regional economy have been analyzed in some studies (Wennberg and Lindqvist, 2008). Porter (2003) found out that the regional economic performance is strongly influenced by local clusters strength.

In this context, essential contribution of the present inquiry is of methodological and instrumental scope, trying to consider a quantitative methodology to survey the existence of clusters in Portugal, in a relatively little explored sector by literature - tourism. After some more conceptual considerations on clusters, we will approach the topic about clusters in the tourism sector and will do a brief revision of literature namely pointing some specificities of clusters’ mapping and
economic performance. Then, we will consider and test a methodology, in a rigorous and quantified way, in order to identify, to map and evaluate the economic performance of tourism clusters in Portugal. Finally, in the conclusions we will synthesize the main points and results of the present inquiry.

2. Literature Review

2.1 Definition of Clusters

Clusters have been defined (implicit or explicitly) for some as a set of close companies in geographic terms (Swanw and Prevezer, 1996; Rosenfeld, 1997; Porter, 1998; Cooke and Morgan, 1998; Crouch and Farrel, 2001; Cooke, 2001), or situated in a specific area (Swanm and Prevezer, 1996; Cortright, 2006) that produce a product or similar service (Rosenfeld, 1997), for others as a group of interrelated industries (Simmie and Sennet, 1999; Porter, 2000, 2003), without neglecting the importance of institutions (Porter, 1998), of synergies that establish between the companies located in cluster (Roselfed, 1997) and the possible competition between them (Feser, 1998; Bergann and Feser, 1999; Ketels and Memedovic, 2008), or still as catalysts of politics for the competitiveness (Shakya, 2009).

The concept of clusters, has been, in general applied to the transforming industry (Jackson and Murphy 2002; Steinle and Schiele 2002; Nordin 2003; Cunha e Cunha, 2005), but its applicability to the services sector have been reduced, in particular in tourism. However, it has been seen in the most recent years, an exponential growth (Jackson and Murphy, 2002; Breda et al., 2004; Flowers and Easterling, 2006).

According to Porter (2003), the regional economic performance is strongly influenced by the local clusters strength, for the vitality and plurality of the innovation. Literature on clusters establishes that the agglomeration creates cheaper externalities in terms of access to the production factors (static externalities), as well as promotes the learning and innovation (dynamic externalities) through the interactive learning (Porter, 2003; Folta et al., 2006; Gilbert et al., 2007; Titze et al., 2008). Titze et al. (2008) they go farther when stating that the success of clusters in the developed countries spread quickly for the developing countries from the professional researchers’ interest, and political makers.

It is a basic conclusion that the economic activity is focused in the space and, after this, has an increasing attention for the strength of agglomeration and the local role in the economic development.
From the seminal work of Becattini (1979), that defended the use of industrial regions as basic unit of analysis, many researchers have considered industrial clusters or industrial regions, as own entity. Case studies in specific regions had framed some of the most perspicacious and remained works in industrial clusters. Among these studies there are researches of known clusters - Silicon Valley (Saxenian, 1994), the cinematographic industry of Hollywood (Scott, 2004), Kentucky Cluster Chalupa (Rosenfeld et al., 2000), Minnesota Cluster of the snowmobile industry (Munnich et al., 2002) among others. For example, Huggins (2008) presents studies of case of four clusters of knowledge, to understand how the way operandi of these clusters evolves. It studied the case of the Valley Silicon clusters (United States), Cambridge (the United Kingdom), Ottawa (Canada), and Helsinki (Finland). Ganne and Lecler (2009) edited a set of researches using three models - industrial regions, industrial clusters and polar regions of competitiveness - through a general vision on the case of Japan, China, Vietnam and Thailand.

Business Europe (2009) is optimistic when assuring that clusters are a source of job creation that stimulates innovation allowing the allotment of information between the different actors and the creation of strong synergies between the complementary sectors throughout the value chain. They are still a tool essential to foment the enterprise spirit, helping the companies to find resources, knowledge and technology and to facilitate ideas to be transformed into business-oriented chances (Porter, 2003). Clusters can reduce barriers to the entrance in the market and also foment the creation of new companies and business-oriented models. This fact is underlined by well-succeeded experiences, as the center of biotechnology in Wallonia and Solar Valley in the East Germany, where these groups appeared in the sequence of the closing of the mines and steel workshops. Clusters are part of the strategies to increase the regional competitiveness and the regional development (Business Europe, 2009).

However, there are studies that contradict these evidences related to the fact of new companies to be positively affected, not affected, or exactly negatively affected for the localization in economic cluster (Wennberg and Lindqvist, 2008). Other aspects are criticized, namely the ambiguity of the concept of cluster, the conceptual absence of social networks inside and outside clusters, as well as the lack of identity of the dimension of cluster (Asheim et al., 2006).

2.2 Clusters in the Tourism Sector

The majority of the studies on clusters falls again into the analysis of the transforming industry, existing a gap in terms of studies that lean over the services, in particular on tourism (McRae-Williams, 2002; Capone, 2004). Tourism constitutes an engine of economic development
with particular incidence at regional level, but whose national impact is also significant (Jackson et Murphy, 2002). The same authors state that the application of the cluster concept to the tourist industry is extremely appropriate due that the product interacts with the local basis, promoting shares joint of interrelated companies, leading to the formation of clusters.

Despite Porter (1998) developing studies particularly in the scope of the most traditional industries, this author relates the importance of the belonging elements to tourism clusters, stating that the satisfaction of the tourist does not depend only on appeals of the principal attraction of the place, but also of the quality and the efficiency of correlated companies - hotels, restaurants, shopping centers and means of transport.

Due of being not much the studies in this area they are also scarce, in contrast of what happens with the concept of cluster in general, the definitions of tourism cluster (Santos, 2007). Monfort (2000) defines a tourism cluster as a complex group of different elements, including the services carried through for business-oriented companies of tourism or (lodging, restaurants, travel agencies, the wealth of aquatic and thematic parks), supplied by experiences of vacation tourism; multidimensional meeting of interrelated companies and industries; communication and transport of infrastructures and complementary activities, services and the natural resources and institutional politics.

For Beni (2003) cluster tourist is a set of attractions with tourist detached distinguishing, concentrated in a delimited geographic space endowed with equipment and services with quality, collective efficiency, social cohesion and politics, joint of the productive chain and associative culture, and with excellent management in company nets that create comparative and competitive advantages. Capone (2004) states that tourism cluster is a geographic concentration of companies and institutions interconnected in tourist activities, including suppliers, services, governments, institutions, universities and competitors.

Noveli et al. (2006) add that the aim of tourism cluster is to take companies, that generally work isolated with the purpose to construct a tourist product of success in a certain region. Cunha e Cunha (2005) in its study on the impact of tourism cluster in the local development, point out with respect to a concrete definition of tourism cluster as a group of companies and on institutions to a product that is tied with its local basis and the joint share of an accumulation of entailed companies to the tourist products of the region. The participation of other actors and not only the suppliers to develop tourism cluster (Brown and Geddes, 2007). For these authors government must stimulate and finance programs to attract private investments and to invest in infrastructures, as well as promoting the tourist region once tourism cluster allows to exceed crises.
Jackson and Murphy (2002) had established an analytical framework to improve the understanding of successful tourist destinations and Flowers and Easterling (2006) had applied the theory of Porter’s cluster and the strategies of competitiveness for the industry of trips and tourism in the country of South Carolina Low Country and Resort Islands Region, where it examines the growth of tourism cluster.

2.3 Mapping of Clusters

The mapping of clusters is a relatively new approach that allows a better perception of the presence, profile and economic performance of clusters. The use of the word “mapping” mentions two basic aspects from this research method (Ketels and Sölvell, 2006): first, the mapping of clusters is based on the mapping of the classification code of industrial clusters. And secondly, the mapping data of clusters allow locating them geographically.

Sölvell et al. (2009) state that the mapping of clusters is an important step for the scientific research and clusters’ policy. According to Ketels and Sölvell (2006) the main advantage of the approach of clusters’ mapping is the comparability between its roots in the behaviour of the real company. The data of a cluster survey is an important element to understand the composition of a regional economy and the standards of geographic distribution of the economic activity of a determined category of cluster.

However, for Sölvell et al. (2009) there are discussions on the quality of the users´ data, especially in the disaggregation of the available indicators, this because they are below of the desired level for professionals and politician deciders. The following reasons are evidenced: (i) professionals need more data on its clusters to suit themselves better to the individual definitions of its clusters; (ii) there are not enough data on the impact of the politics of clusters, to give general support to the political deciders according to clusters; and (iii) the political deciders need more data to be translated in share recommendations, on what about to do and which the focus areas.

There are clear limitations that can be only faced through the slow process to improve the way as the statistical data are collected or to adopt a total different approach for the collection of data. In general, the cluster mapping has to be transformed from a tool that is useful for researchers and assessor ship of high level for an instrument with direct applicability to the clusters’ professionals (Sölvell et al., 2009).

Some research on clusters mapping has used the methodology of Porter (2003), namely on the role of clusters and the competitiveness in the stimulation of regional economies (Karen et. al., 2008), as well as in case studies of innovation clusters in Europe (COM, 2007; COM, 2008). Also
the European Cluster Observatory identified more than 200 clusters regional through this methodology.

2.4 Clusters and the Economic Performance

The economic development based on clusters became a subject each more popular for investigators and professionals of economic development (Ketels, 2003). For Gilbert et al. (2008) geographic companies located inside clusters reach a better performance in terms of innovation, of growth taxes and survival, than geographic companies not located inside clusters. Gugler and Keller (2009) add that there are substantial differences in the economic performance between the regions in all countries. This suggests that the majority of the main determinants of the economic performance is found at the regional level. Porter (2003) proposed a complementary regional approach of the regions or cities. In his investigation analyzes general indicators of the economic performance, the composition of the regional economies and the role of clusters in the economy of the United States in the period of 1990 the 2000. It offers an interesting picture for the analysis of economic performance of the regions in other countries.

So clusters can create economic benefits. Porter (1998) evidences the economic benefits of cluster in three dimensions. Firstly, clusters allow a bigger productivity. The companies can operate much more with bigger efficiency, on the basis of more specialized actives and suppliers with lesser times of reaction, than when working alone. Secondly, companies and investigations institutions they can built connections learn and to innovate better, this because the tacit information and knowledge are better developed and local interchange (OECD, 2001; Porter, 2001). Thirdly, the formation of the business tends to be bigger in groups. Start-ups are more dependent on external suppliers and partners - everything to be found in cluster. Clusters can distribute the cost of a failure, as the entrepreneurs can fall again on chances of local job into many other companies in the same field (Wennberg and Lindqvist, 2008).

These benefits are important for the cluster participants, as for the public policies. For companies, because they create additional value that many times exceed the highest costs of intense competition of property, techniques and of the customers in the place. For the public policies, bigger productivity and innovation in clusters are critical, because they are the factors that in long term, define the level of sustainable prosperity in a region (Ketels, 2003). The author adds that clusters are of professionals of economic development interest and for executives of the companies; because the conceptual thought suggests that they affect strongly the performance.
Lindqvist and Wennberg (2010) strengthen this idea stating that the located companies in strong clusters can create more jobs, greater tax collection and the wages are higher. These authors in its study had found evidences that the localization of strong clusters is highly related with the economic benefits for new companies. The enterprise strength of cluster has a strong important effect in the survival of the companies, in the creation of job, the payments of VAT and payments of wages. These effects vary in accordance with geographic level with what data are aggregated, justifying the reason for the conflicting evidences in previous studies. For the payment of wages, the results of the effect of cluster are stronger if measured at a bigger geographic level, while for the company’s survival, the results are more prominent if we group the measured effects at a lesser geographic level.

According COM (2008) it is rational to suppose that clusters are among the most excellent microeconomic factors that influence the levels of prosperity of a region. Regional Clusters and specializations are empirically associated to higher levels of prosperity. The European Cluster Observatory and other attempts of mapping of clusters - as the characterization of standards of specialization in categories of clusters (groups of empirically co-situated industries) in regional economies in Europe, North America and other countries - had given systematic tests on these links.

The role of clusters in the explanation of the economic performance of the regions was widely confirmed also for other studies, even so many are specific cases, and commented in depth and empirical scale they are extremely rare. Porter (2003) studied clusters of the United States (E.U.) where showed that the regions of the E.U have an higher ratio of its total labour located in “strong” clusters and benefit of a high level of economic development, under the way of average wage and growth of job, as well as of an high degree of patents.

Other studies had evidenced that clusters can improve the performance of new companies. Stough et al. (1998) had investigated the economic development of Washington DC in the biggest area of the United States during some decades, and found out that the creation and growth of new companies can be associated to a high concentration of qualified technique population, with high degrees of business-oriented engineering and technology. Rosenthal and Strange (2005) had investigated in 2001 all the new companies in the great metropolitan area of New York and they had evidenced that the specialization, measured with job quotients in a local area, was positively related to the job creation among the new companies. Pe'er and Vertinsky (2006) had investigated new enterprise operators in the sectors of Canadians manufacture 1984-1998 and had evidenced that the grouped companies had higher survival taxes than not grouped companies. Lima et al. (2009) had found, in an empirical study on footwear clusters, that the position of a company in cluster has positive impact in the performance of companies. According to these authors the differences in
performance between companies that integrate a cluster can be explained by the resources that are shared by these companies.

However, these results contradict other studies where they suggest that the new companies are adversely affected by the localization of cluster. A longitudinal study detailed of Dumais et al. (2002) on the plants of the United States showed in five year intervals 1972-1992, found out that new companies in clusters had greater survival probabilities, but had not positively strengthened the job creation in a region. Ketels (2003) alert to, that although cluster based on economic policy can have a great potential, it is not a panacea. In fact, the biggest danger for this approach can be its current use as a fashion that comes of “newness” in the economic development. The high imprisoned hopes when bound to economic cluster in the development can give results, however all that investigation and practice to reach this stage according to the most rigorous requirements of this new age will take long time.

Currently, the European enterprise community is convinced that the development of cluster is an important chance to follow the necessary economic changes in the next future (Business Europe, 2009). The crisis must be a catalyst for the change, a chance for a leap forward in a more enterprising and innovative society. Otherwise we have to accept that the prosperity of Europe, cohesion and position in the world will decrease gradually throughout the time. To define a strategy of an ambitious cluster, that subsists until the global challenges of competition, and that supports the emergence of clusters of world-wide class and helps to regenerate European territories to supply an essential motivation for the growth and job creation in Europe (Business Europe, 2009).

In Portugal, had been identified regional clusters as a “sub product” of a study with the aim to contribute for the development of international competitiveness of the Portuguese industry (Porter, 1994). The study detaches that the Portuguese industries have an exportation tax comparatively high. A characteristic of those industries is its frequent geographic concentration. The examples indicate, however, that several of these industries hardly constitute clusters, or they only compensate “undeveloped” clusters with a low level of interaction between companies and industries.

Gouveia and Duarte (2001) and Santos (2002) had carried out analyses of the tourist activity in Portugal, despite to neglect relative conceptual aspects to the definition and characterization of clusters. The authors, in general do not relate how they had identified tourism clusters, they hadn’t quantified them nor rigorously located. He also does not have any reference to the respective future evolution, policy measures to potentiate and to develop these clusters, as well as a rigorous evaluation of its impact in terms of environment and sustainability. Santos (2007) had presented a methodological and quantitative proposal of general character, of identification of tourism clusters,
testing it in the Region of the Algarve in which policy authorities and public in general believe to exist a tourism cluster. The author concluded from the applied methodology that there was no tourism cluster in this region, at best, based exclusively on agglomeration pointers, would constitute a tourism cluster in a relatively restricted niche of hotel sectors - the tourist apartments and resorts.

Observatory of European SMEs (2002) states that different changes appeared in the last years as result of a governmental strategy as aim to stimulate more cooperations between enterprises, to create technological infrastructures and promote image of some products in Portugal and foreign countries. These efforts had created the basis for the implementation of a national politics of cluster.

3. Methodology and Research Data

3.1 Methodology

When an investigator does a work of research, he has, in front of him, several doubts and, many times, little information to solve them. Such decision depends on some factors, as the aim of the study, nature of variables, among others (Perez et al. 2006). Many methodologies have been adopted in the identification and evaluation in the performance of clusters using some indicators, since variables related with wages, growth of job, degree of patents, collection tax (Porter, 2003; Lindqvist and Wennberg, 2010). According to Sölvell et al. (2009) the European Cluster Observatory represents the state of the art in supplying a European scale of clusters to the service of organizations, but for these authors it is evident that it is much more necessary to become a complete information service complementing with studies with other variables.

Sölvell (2009) states that a new model of clusters must be constructed in such a way involving the evolution strength as well constructive, it still suggests a little more complex understanding of the question about cluster involving a series of different characters, playing different roles having a mixture of different relations. In the future the European Cluster Observatory longs to use some levels of enterprise data in clusters identification, namely: geographic coordinates, complete identification of the regions, turnover, detailed classification of the economic activities, among others (Sölvell, 2008; 2009).

In this sense, we follow the methodology proposed by Sölvell (2008, 2009) to investigate new models of identification and performance of clusters and to inhale, someway, for the contribution of the future aims considered by the European Cluster Observatory, having as basis the turnover of 2008 of the companies of Continental Portugal and Islands, based on data of the
National Institute of Statistics (INE), distributed by the Portuguese regions and the respective economic activities (CAE). This way we will get the information on the final number of clusters, frequencies of clusters and the descriptive statistics of each cluster, of CAE and region. The adopted methodology was based on the use of secondary data supplied by INE and was chosen for the application of the quantitative method of multivariate analysis (analysis of clusters) in SPSS software.

The continuous variable corresponds to the turnover of 2008 and consists of the liquid amount of the sales and services (including compensations) according to the normal activities of firms, consequently after the reductions in sales and not including nor the value added tax nor other taxes directly related with the sales and services.

Two categorical variables were used: The characteristic activities that constitute the tourism account satellite defined by WOT et al. (2001) and it will be used a disaggregated level of economic activity (CAE Rev. 3) 5 digits to analyze the degree of space agglomeration of the 53 defined activities, as shown in the following table:

Table 1 – Economic Activities defined in the Study

<table>
<thead>
<tr>
<th>49100</th>
<th>Interurban transport of passengers by railway</th>
</tr>
</thead>
<tbody>
<tr>
<td>49310</td>
<td>Land transports , urban and suburb. passengers</td>
</tr>
<tr>
<td>50300</td>
<td>Transport of passengers through interior waterways</td>
</tr>
<tr>
<td>51100</td>
<td>Air transport of passengers</td>
</tr>
<tr>
<td>55111</td>
<td>Hotels and restaurants</td>
</tr>
<tr>
<td>55112</td>
<td>Pensions with restaurant</td>
</tr>
<tr>
<td>55113</td>
<td>Inns with restaurant</td>
</tr>
<tr>
<td>55114</td>
<td>Lodgings with restaurant</td>
</tr>
<tr>
<td>55115</td>
<td>Motels with restaurant</td>
</tr>
<tr>
<td>55116</td>
<td>Hotels -apartments with restaurant</td>
</tr>
<tr>
<td>55117</td>
<td>Tourist resorts with restaurant</td>
</tr>
<tr>
<td>55118</td>
<td>Tourist apartment with restaurant</td>
</tr>
<tr>
<td>55119</td>
<td>Other hotel establishments with restaurant</td>
</tr>
<tr>
<td>55121</td>
<td>Hotels without restaurant</td>
</tr>
<tr>
<td>55122</td>
<td>Pensions without restaurant</td>
</tr>
<tr>
<td>55123</td>
<td>Tourist apartment without restaurant</td>
</tr>
<tr>
<td>55124</td>
<td>Other hotel establishments without restaurant</td>
</tr>
<tr>
<td>55201</td>
<td>Furnished lodging for tourists</td>
</tr>
<tr>
<td>55202</td>
<td>Rural tourism</td>
</tr>
<tr>
<td>55203</td>
<td>Holiday colonies and camps</td>
</tr>
<tr>
<td>55204</td>
<td>Other short term lodging place</td>
</tr>
<tr>
<td>55300</td>
<td>Campsites and caravan</td>
</tr>
<tr>
<td>55900</td>
<td>Other lodging places</td>
</tr>
<tr>
<td>56101</td>
<td>Traditional restaurants</td>
</tr>
<tr>
<td>56102</td>
<td>Restaurants with balcony seats</td>
</tr>
<tr>
<td>56103</td>
<td>Restaurants without table service</td>
</tr>
<tr>
<td>56104</td>
<td>Typical restaurants</td>
</tr>
<tr>
<td>56105</td>
<td>Restaurants with dancing spaces</td>
</tr>
<tr>
<td>56106</td>
<td>Ready meals to take home</td>
</tr>
<tr>
<td>56107</td>
<td>Restaurants (including movable activities)</td>
</tr>
<tr>
<td>56210</td>
<td>Provide meals for events</td>
</tr>
<tr>
<td>56290</td>
<td>Other activities of meal services</td>
</tr>
<tr>
<td>56301</td>
<td>Cafés</td>
</tr>
<tr>
<td>56302</td>
<td>Bars</td>
</tr>
<tr>
<td>56303</td>
<td>Pastries and tea houses</td>
</tr>
<tr>
<td>56304</td>
<td>Other drinking establishments without shows</td>
</tr>
<tr>
<td>56305</td>
<td>Drinking establishments with dancing spaces.</td>
</tr>
<tr>
<td>77110</td>
<td>Rental cars</td>
</tr>
<tr>
<td>77210</td>
<td>Sports renting</td>
</tr>
<tr>
<td>77340</td>
<td>Water transports renting</td>
</tr>
<tr>
<td>77350</td>
<td>Air transports renting</td>
</tr>
<tr>
<td>79110</td>
<td>Travel agency activities</td>
</tr>
<tr>
<td>79120</td>
<td>Tourist operator activities</td>
</tr>
<tr>
<td>79900</td>
<td>Other reservation services and related activities</td>
</tr>
<tr>
<td>91020</td>
<td>Museum activities</td>
</tr>
<tr>
<td>91030</td>
<td>Activities of historical places and monuments</td>
</tr>
<tr>
<td>91041</td>
<td>Zoo, botanic and aquarium activities</td>
</tr>
<tr>
<td>91042</td>
<td>Park and natural reserve activities.</td>
</tr>
<tr>
<td>93210</td>
<td>Amusement park and thematic activities.</td>
</tr>
<tr>
<td>93291</td>
<td>Bullfighting activities.</td>
</tr>
<tr>
<td>93292</td>
<td>Marine activities</td>
</tr>
<tr>
<td>93293</td>
<td>Organization of tourist activities</td>
</tr>
<tr>
<td>93294</td>
<td>Other amusement activities</td>
</tr>
</tbody>
</table>
The other categorical variable consists of 30 regions of Nomenclature of territorial Unit – 2002 of the research geographic area, later mapped and analysed according to regional areas that constitute tourism in Portugal, as shown in the following figure:

**Figure 1 - Map of Tourism Regional Portuguese Areas**
3.2 Analysis Statistics and Discussion of Results

According to Norusis (2004) the analysis of clusters is a multivariate procedure to detect homogeneous groups in data, the groups can be constituted by variables or cases. The cluster analysis intends to organize a set of cases in homogeneous groups, in such way that the individuals that belong to a group are most similar possible between them and differentiated from the other. This analysis tries to classify a set of objects (individuals, products, etc.) in groups or categories using the observed values of variables, without being necessary to define criteria that classify the data that integrate a certain group (Norusis, 2004)).

Therefore we will use the TwoStep Cluster Analysis, an explanation tool that allows to disclose natural groupings of a data set that on other hand would not be evident (Aldenderfer and Blashfield, 1984). The algorithm used for this procedure has diverse options that differentiates it from other techniques of groupings:

i) The ability to create groupings (clusters) based on categorical and continuous variables;
ii) Automatic Selection of the number of clusters. It compares the values of the model of choice of creation throughout different solutions of groupings. This procedure is able to determine automatically the excellent number of clusters;
iii) The ability to analyze efficiently a high number of data. Carries out an escalation - “tree of grouping” summarizing the registers.

In order to analyze in set the continuous variable (in the present analysis, the turnover and the categorical variable (region and CAE), the TwoStep analysis uses the distance of likelihood measure that assumes that the variable in cluster model is independent. At the same time, the continuous variable (turnover) is identified as having normal distribution and each categorical variable (region and CAE), having multinominal distribution. In this analysis we will get the information on the number of clusters, the final frequencies of clusters, and the descriptive statistics for cluster. This analysis involves four steps:

1) We get the measures of distance of the similarities and the separation (differences) of clusters;
2) We combine the two more closed clusters to form the new cluster;
3) We calculate, again, the distances with the same “existing similarities” of the existing clusters for the new cluster;
4) We repeat the procedure of step two until building the cluster.

This process show us a hierarchic solution of clusters. Higher clusters contain more integrated clusters of low level. In each level clusters are separated (each item belongs to a single cluster). This analysis identifies, sequentially, clusters in the joined solution. The process of auto-clustering
allowed to select the number of clusters, where the smallest values in \textit{BIC} (Bayesian Information Criterion) indicate better models. The best solution of cluster is the lesser value of \textit{BIC}. A good solution has a high ratio of the changes of \textit{BIC} and distance measures (Table 2).

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|}
\hline
Number of Clusters & Schwarz's Bayesian Criterion (BIC) & BIC Change(a) & Ratio of BIC Changes(b) & Ratio of Distance Measures(c) \\
\hline
1 & 17708,358 & & & \\
2 & 16673,418 & -1034,940 & 1.000 & 1.628 \\
3 & 16253,531 & -419,886 & .406 & 1.441 \\
4 & 16133,215 & -120,316 & .116 & 1.198 \\
5 & \textbf{16125,002} & -8,214 & .008 & 1.093 \\
6 & 16165,104 & 40,102 & -.039 & 1.115 \\
7 & 16258,947 & 93,844 & -.091 & 1.247 \\
8 & 16444,963 & 186,016 & -.180 & 1.010 \\
9 & 16634,533 & 189,569 & -.183 & 1.276 \\
10 & 16904,144 & 269,611 & -.261 & 1.024 \\
11 & 17180,580 & 276,436 & -.267 & 1.062 \\
12 & 17473,484 & 292,904 & -.283 & 1.014 \\
13 & 17769,953 & 296,469 & -.286 & 1.202 \\
14 & 18110,552 & 340,599 & -.329 & 1.007 \\
15 & 18452,682 & 342,130 & -.331 & 1.068 \\
\hline
\end{tabular}
\caption{Auto-Clustering}
\end{table}

\textit{a} The changes are from the previous number of clusters in the table.

\textit{b} The ratios of changes are relative to the change for the two cluster solution.

\textit{c} The ratios of distance measures are based on the current number of clusters against the previous number of clusters.

The solution of TwoStep clusters found 3 clusters, the first that represents 43.7 percent of the sample (N=519 registers), the second representing 28.3 percent (N=336) third with 28 percent (N=333) (Table 3). due to the fact that there are no registers in some regions in certain CAE (turnover= 0€) had been considered 1188 registers and excluded 2131, however the necessity had been treated as missings cases in the database not being necessary to exclude them from the same one, since it have to fullfil the methodology of the register of all regions and CAE (even when there were no values and they had been expressed in 0€ by INE), as showed in table 4.
Table 3 – Distribution of Clusters

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>percent of Combined</th>
<th>percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1</td>
<td>519</td>
<td>43,7 percent</td>
<td>15,6 percent</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>336</td>
<td>28,3 percent</td>
<td>10,1 percent</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>333</td>
<td>28,0 percent</td>
<td>10,0 percent</td>
</tr>
<tr>
<td>Combined</td>
<td>1188</td>
<td>100,0 percent</td>
<td>35,8 percent</td>
</tr>
<tr>
<td>Excluded Cases</td>
<td>2131</td>
<td></td>
<td>64,2 percent</td>
</tr>
<tr>
<td>Total</td>
<td>3319</td>
<td></td>
<td>100,0 percent</td>
</tr>
</tbody>
</table>

The following table show us the information about the average turnover for each cluster:

Table 4 – Centroids of Clusters

<table>
<thead>
<tr>
<th>Description</th>
<th>Turnover (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Cluster 1</td>
<td>11709,4575</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>15241,8467</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>51885,0425</td>
</tr>
<tr>
<td>Combined</td>
<td>23969,8553</td>
</tr>
</tbody>
</table>

Through the reading of these results we show that cluster 1, 2 and 3 have an average of turnover 11,709 thousands/€ (43,7 percent), 15,242 thousands/€ (28,3 percent) and 51,885 thousands/€ (28 percent), respectively. Based on these results and for a better interpretation of the performance evaluation of the identified clusters, we consider the following typology of clusters:

Cluster 1 – Low Performance Cluster
Cluster 2 – Medium Performance Cluster
Cluster 3 – High Performance Cluster

Identified clusters through the above described methodology; we proceed for the mapping and positioning of clusters identified by different Portuguese tourism areas, as the following figure:
For the analysis of the realized mapping, we can observe that cluster of low performance is predominantly concentrated at North and Interior Center of Portugal, while clusters of medium and
High performance dominate the Coast Center, South and Islands. They are distinguished despite the tourism regions of Porto and North of Portugal, of the Algarve, the Coast of Alentejo, Douro and West are exclusively included in an only type of cluster. The remaining regions are constituted by differentiated clusters. It has to highlight that the Interior of Portugal predominates cluster of low performance while in the Coast the medium and high performance.

We can highlight that the regional area in the Center and the one of Alentejo is constituted by three types of cluster. In the regional area of the Center the one belongs to cluster of high performance (12 percent) is situated in the Coast, that fact can be related for being an alternative tourist sun region with sea and gastronomy (the known sucking pig of Bairrada). In Alentejo, and as we go along from North to South of this region, we are seeing an increase of the performance of the region.

Although the regional area of Leiria-Fátima belong predominantly to cluster of low performance (81 percent), 19 percent is included in cluster of high performance. This could be related to the fact that this region is situated in the municipality of Fátima, an area with strong bet in religious tourism (Sanctuary of Fátima). The same happening with the regional area of Serra da Estrela where 64 percent belong to cluster of low performance, the other 36 percent is included in cluster of medium performance, probably justified for the fact to be included in the region that bets in Tourism Mountain and snow (Serra da Estrela).

In relation to the regional area of Lisbon and Vale do Tejo despite to predominate cluster of medium performance (64 percent), 36 percent of this region are characterized of high performance. This event can be related with the fact of the capital (Lisbon) being situated in this area and being a city that is constituted by a set of tourist activities that attract a wide and diversified tourism, also stimulating by the brand image, internationally known.

In the following map it is possible to identify CAE that most contribute to the formation of a cluster of Low, Medium and High Performance:
Low Performance Cluster:

Analyzing this map we verify that the travel agencies and historical activities of the small farms and monuments have a significant weigh in this type of cluster, is also to mention the same in the activities related with restoration. In this cluster it has some points that evidence that we are before regions of historical and cultural interest and with strong gastronomic evidences.

Medium Performance Cluster:

In this map we can see that the tourism activities of bigger weight for medium performance cluster are activities related with lodging. It has also to highlight the activities with marines as well as of transport of passengers for navigable ways, reporting these activities mainly for the region of the Algarve. Still the bullfighting activities are evidenced, justified for the inclusion of the areas where there is a strong tradition in bullfighting in this cluster.
In this cluster there is a mix of economic activities that contribute for the high performance that it has got, namely activities of the zoological, botanical gardens and aquariums; transport and renting of aerial ways, organization of activities of animation, being exclusive between identified clusters. The activities of lodging are also evidenced, as well as the activities of recreation ports (justified for being a cluster to a large extent in coastal area). The activities of the museums are intrinsically related with the area of Lisbon for the great number of museums that it has.

4. Final Considerations

In terms of continental Portugal the performance of the tourism regions is increasing from North to South of Portugal and in the Interior of Portugal exists a cluster of low performance while in the coast of medium and high performance. The results are not many times coincident with the opinions that we formalize at first sight and the level of the common sense. This because, the empirical evidences support that the tourism Region of the Algarve although known internationally by the strong tourist activity related with the tourism of sun and sea, not including cluster of high performance as we could eventually deduce, but yes in cluster of medium performance. This situation can be due to the fact of the influence that the international crisis of the last years has had in the tourism in all the destinations of reference in world, not being exception for this region.

The region of tourism of the Coast of Alentejo, the South of the tourist region of Alentejo the islands of Madeira and the Azores represent a high performance in tourist terms in Portugal. In relation to Alentejo, these results can be related with the new
trends of alternative tourist destinations of sun and sea in relation for example to the Algarve and the taste for the nature tourism. About to the islands, the performance can be explained by the brand image of this region known as “Pearls of the Atlantic”. To point out that despite the region of Oporto and North of Portugal and Interior Center being areas endowed with odd landscape conditions, of unique natural resources, full of culture and history, not yet duly developed to contribute for the performance of the tourism in Portugal.

Analyzing the weigh of turnover of CAE for each cluster, we verify that cluster of low performance it is the one that has a bigger variety of economic activities, followed by cluster of high and medium performance. There are activities that are exclusively in certain clusters: the activities of small farms and travel agencies and historical monuments - to cluster of low performance; tourist resorts with restaurant and other lodging places - to cluster of medium performance; air transportation of passengers, air transports renting and zoological, botanical gardens and aquariums - to cluster of high performance. Still to relate that the activities of the recreation ports, campsites and caravan, inns with restaurant, pensions without restaurant also share cluster of average and high performance. The same happens for other hotel establishments without restaurant for clusters of low and high performance.

These findings have important implications for both academics and policy makers. In general, a competitive and dynamic region is characterized by the simultaneous presence and combination of several factors which can attract an increasing number of tourism activities. Our findings show those high performance clusters are regions which detain a set of distinctive resources contributing for their competitiveness.

Any study has inevitably limitations. The “perfect study” was never, and will be never reached. The limitations of any study vary depending on the choices, deliberated and unconsciously made. In a general way, the limitations of the present study, result in two basic aspects: i) the quality and availability of the database, especially in the disaggregation of the pointers, and i) for the fact that the methodology is pioneering in terms of creation of a new model of identification of clusters and not to have been tested empirically. However, we are convinced that this study contributed for the advance of economic performance of clusters tourism. According to the results it would be interesting to know if there was a direct relation between the performance of clusters
identified with other indicators namely the monthly average profit and the dimension of the firms in terms of employees. Another suggestion in terms of future researches would be the creation of a competitiveness model and to verify its applicability in several tourism clusters in order to identify which indicators and variables mostly contribute for the regional development and possibly to state implications on its potential competitiveness.

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Correlates of Gender and Credit Behavior in Small Firms: Evidence from a Small, Developing Econom

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Introduction

The financing of small firms has been a matter of enormous interest to policymakers and academic researchers alike (e.g. Berger & Udell, 1997; Robb & Wolken, 2002; Beck et al., 2008; Cole & Mehran, 2009 etc). This is even more so in developing economies where market imperfections are high and the information asymmetry is stronger between small and large firms. Small firms, especially those in developing economies, generally lack proper record keeping, have poor management and do not have a structured business plan. These characteristics make the risk of lending to these firms much higher (Berger & Udell, 1997). The situation however, becomes grimmer when the issue of gender is thrown into the analysis. The body of literature looking at gender and entrepreneurship shows that indeed, there are differences in the financing behaviour of male and female owned firms (Brush, 1992; Cole & Mehran, 2009; Carrington, 2006). It is this finding that has motivated this study. A clearer understanding of how female-owned firms differ
from male-owned firms in their financing behaviour is critical for policymakers and investors who are interested in providing financing for small firms.

Indeed, the literature on gender and entrepreneurship suggests that the proportion of males involvement in entrepreneurship is higher than that of females in almost all countries (GEM, 2008). The situation in Jamaica is no different. In 2008, GEM revealed that 54 percent of Jamaican entrepreneurs were males while 46 percent were female. Critically, more males were involved in start-ups than females. More males got involved in what is called opportunity entrepreneurship. Eight percent of males started business which could be defined as opportunity seekers while only 6 % of females did. In terms of risk profile, studies also show that female entrepreneurs take risk after carefully analyzing the situation compared to men. This gender difference however is diminishing rapidly. Researcher have recognized that in efficiency driven economies, more women are becoming involved in entrepreneurial activity and undertaking the risk involved ( Master and Meier, 1988).

Study Aim

This paper aims to test the hypothesis that gender is a critical variable that can explain the credit behaviour of small firms from developing economies. While the literature on gender and entrepreneurship is extensive, very little work exists on this area in the developing world. As far as we are aware, this is the first study to look at the issue in Jamaica, a small, developing economy. There are other reports or studies which touched on gender and small business but no serious attempt is given to the issue of financing. Further, because of the idiosyncratic features of the
Jamaican economy (high debt burden, anaemic economic growth, high interest rate, large imbalance between male and females in tertiary education etc), the need for a context specific study of this nature is important to generate baseline stylized facts to help policymakers design better credit programmes for these enterprises.

**Method**

This study relied on survey data collected from over 260 small firms in the Jamaican economy. These data were analyzed using univariate statistical techniques. The study examined variables relating to firm and owner characteristics and, the credit behavior of the firms. These variables were correlated with gender to determine whether or not there exist variations among the various firms in the sample.

**Findings**

The preliminary results from the analyses revealed that, regarding variables relating to owner characteristics, female run business have less college educated owners compared to male run businesses; of the total sample, only 17% of females had a college education while 40 % of principals in male-owned had college education. This is surprising as more females are registered in higher education compared to males. In terms of work experience, more principals in male-owned firms (36%) had over 10 years of experience compared to female-owned firms (17%).
In terms of firm characteristics, the size of the firm remained relatively the same. Twenty percent (20%) of female-owned firms and 24% of male-owned firms had between 5-15 percent. Also, female-owned firms are much younger than male-owned firms. Thirty three percent (33%) of male-owned firms have been in operations for more than 20 years while on 8% of female firms have been in operation for the same period. As it relates to organizational form, more male-owned firms were listed as limited liability companies compared to female-owned firms. Also, a relatively high percent (12%) of female-owned firms are operated as sole proprietorship.

As it relates to financing behaviour, a number of correlates were identified. Firms were analyzed on the services obtained from Banks, the method of financing for growth and start-up. Regarding services obtained, male-owned firms generally obtain loans while female-owned firms obtained banking services such as bill payments, money transfer etc. For the financing of business growth, more male firms used bank loan (39%) compared to female-owned firms (11%). Critically, more female-owned firms used business cash flow to finance business growth (10%) compared to male-owned firms (6%). For financing business start-up, more male-owned firms (29%) used a bank loan compared to female-owned firms (7%). In terms of the use of own savings to finance start-up the difference between male and female-owned firms was not that stark. Twenty three percent (23%) of female-owned firms used own savings while 30% of male-owned firms used own savings to finance start-up.
Conclusion and implications

This preliminary analysis used univariate comparisons to look at the difference in financing behavior of male-owned and female-owned firms. The results show that there exist differences in owner characteristics, firm characteristics and financial behavior of these firms. These findings have serious implications for the designing of loan programmes to assist entrepreneurial activities. These programmes will have to first acknowledge that male-owned firms and female-owned firms are not similar in their approach to raising financing for growth and starting their business. Since female-owned firms are less likely to take on large loans, financing institutions must package their loans in sizes that will be attractive to female owned business. The one-size-fits-all approach to lending will not do it. To cure some of these issue with financing behaviours, policymakers have to put programmes in place incentivize females to re-organize their firms in more professional manner such as limited liability corporations. The credit programmes design must fit the idiosyncrasies of male vs. female-owned firms. The results from this study will also add to the body of work on gender, financing and entrepreneurship given insight from a new geographic locale.
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RETHINKING THE CASE METHOD

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RETHINKING THE CASE METHOD

Abstract

The case method was introduced almost a century ago under the assumption that to be effective, learning must reflect actual practice. Today, casebooks are standard in many of the world’s 10,000+ business schools. Drawing on the field of complexity studies, this paper argues that the case method rests on an outdated model of strategic decision-making, one suitable for situations characterized by clear foresight horizons, but not the kind of complex, dynamic and nonlinear situations facing the modern organization. Realigning the case method with actual practice requires a fundamental rethinking of its purpose, theoretical underpinnings, means of production and orientation to the world. This is the impetus for ‘Case 3.0’, a nascent social enterprise whose goal is to build entrepreneurial capacity, in the classroom and out in society.
1. The Case Method

The Merriam-Webster online dictionary defines a profession as “a calling requiring specialized knowledge and often long and intensive academic preparation.” From the very beginning, professional schools inculcated the requisite body of specialized knowledge using highly standardized methods. For example, law was taught using the Dwight Method (named after a professor at Columbia) -- a combination of lecture, recitation, and drill. Students studied dense treatises that interpreted the law and were tested on their level of memorization and recall. But by the late 19th century, the academy began to question the efficacy of lecture and drill as a means to prepare students for the world of practice. In 1870, a newly appointed dean at Harvard Law School, Christopher Columbus Langdell, broke with tradition by introducing cases. Influenced by the prevailing philosophy of inductive empiricism, Langdell viewed law as a science and appellate court decisions as the specimens from which generally applicable principles could be induced. He assembled a representative set of court decisions to create the first legal casebook.

Inducing general principles from a small selection of cases was a challenging task for which a new pedagogy was required (Garvin 2003:58). Langdell developed what later came to be known as the Socratic method: an interrogatory style in which instructors question students closely about the facts of the case, the points at issue, judicial reasoning, underlying doctrines and principles, and comparisons with other cases. Students now prepared for class knowing that they would have to do more than simply recite back material they had committed to memory; they had to present their own interpretations and analysis, and face detailed follow-up questions (Garvin 2003:58).
Langwell’s method initially met with great resistance from students and alumni, but by 1920 it had become the dominant pedagogy in legal education. It was then that Harvard Business School (HBS), presided upon by Law School graduate Wallace P. Donham, adopted the case method. Donham saw that the use of cases in law schools was made possible by several factors: (1) the vast number of published legal decisions, (2) classification of subject matter by instructors, (3) published case books, (4) the elements in the typical law case, and (5) the development of general principles from the discussion of individual cases. However, lacking access to public records of business decisions, business faculty had to research and write their cases from scratch, using anecdotal and other information.

Business cases, Donham reasoned, should be pragmatic in nature, describing real problems in need of real solutions. Both relevant and irrelevant material would be included, so that students would obtain practice in selecting the applicable facts. There would be less emphasis on theories or principles, because in business these were viewed as inapplicable. What mattered were the particulars of each business situation, which were to be understood and analyzed in detail. Melvin Copeland, a professor of marketing, produced the first collection of business problems, and in 1921 ‘the case method’ was ratified by a faculty vote. The Bureau of Business Research was established to develop and write cases for multiple courses until faculty were able to work independently. By 1922, 85 more institutions had adopted casebooks. By publishing books and offering seminars and case-teaching workshops with support from major institutions such as The Ford Foundation, Harvard faculty members accelerated the diffusion of the case method to business schools around the globe (Garvin 2003:58).
Typically consisting of 10 to 20 pages of text and 5 to 10 additional pages of exhibits – often augmented with audio, video and other resources -- the modern business case is intended as an analog of reality, a substitute for the direct experience of a business situation. The business case, according to William Ellet, who has more than twelve years’ experience teaching students how to read, analyze, and write about business cases at HBS, is the equivalent of the laboratory used to educate scientists and doctors. To perform its prescribed role, a case must have the following three characteristics: (1) a significant business issue or issues, (2) sufficient information on which to base conclusions, and (3) no stated conclusions (Ellet 2007).

Four types of situations tend to occur repeatedly in cases says Ellet: (1) Problems — a situation in which something important has happened, but we don’t know the cause(s); (2) Decisions — a situation in which options, evaluative criteria and relevant evidence must be identified; (3) Evaluations — a situation in which the worth, value or effectiveness of a performance, act or outcome requires assessment; and, (4) Rules — a situation in which the right rule (e.g. break-even analysis) must be applied to obtain the required information.

Whereas textbooks are logical and coherent in their presentation, cases attempt to introduce more realism by adding uncertainty, fluidity and contingency. Thus, many cases have complicating properties: information that includes ‘noise’ (irrelevancies, dead ends, and false, biased or limited testimony by characters in the case), unstated information that must be inferred, and a nonlinear structure in which related evidence is scattered throughout the text and is often disguised or left to chance.
The dilemma facing all students beginning a new case is that they don’t know what to look for. For this reason, an active, purposeful, interrogative and structured approach to case analysis is recommended. According to Ellet, this should have five phases:

1) **Situation:** First, the student should spend 5 minutes reading the first and last sections of the case to identify the type of decision situation.

2) **Questions:** Armed with this information, the student should spend about 15 minutes performing a content inventory, building a mental map of the case, marking up high-value sections, facts, numbers and statements pertinent to the problem, decision or evaluation at hand, and recording thoughts and new questions along the way.

3) **Hypothesis:** Lasting approximately 45 minutes, this third and most important phase is to formulate hypotheses. For example, if the case involves a problem, the student might hypothesize that the protagonist (usually a corporate officer) is the cause.

4) **Proof and action:** The next 40 minutes should be spent searching for quantitative and qualitative evidence to support the hypothesis, and thinking through the implications (tangible actions and a detailed plan of implementation).

5) **Alternatives:** Finally, 15 minutes should be spent scrutinizing the hypothesis by asking, for example, whether the problem could be defined differently, what the biggest downside of the recommended decision might be, and whether other pertinent facts may undermine the recommended course of action.

Students are expected to come to class with a recommended decision and implementation plan, and extensive supporting analysis. They often work in study teams to
share the workload and refine their ideas. Then in class — under the questioning and guidance of the professor — they probe underlying issues, compare different alternatives, and finally, suggest courses of action in light of the organization's objectives. Classroom interaction is often enriched by a diverse group of students representing many industries, functions, countries, and experiences.

Proponents of the case method argue that in contrast to a lecture-based approach, time is more productively spent discussing cases about actual business problems and solutions. A recent study of the state of the MBA degree by HBS professors Srikant Datar and David Garvin – based on interviews with 30 deans and associate deans, 28 executives and recruiters, students and leading academic critics, as well as detailed analyses of eleven business school programs and other pertinent data, found that schools that had made the case method the cornerstone of their curriculum produced students better able to think and act across disciplinary and functional boundaries and understand the real challenges faced by practicing managers. Competing schools, on the other hand, had lost touch with reality after re-organizing themselves along disciplinary lines--the chief recommendation of a 1959 Ford Foundation report (Thompson 2008).

Defenders of the case method argue that in contrast to a lecture-based approach, time is more productively spent discussing cases about actual business problems and solutions. Students strengthen their diagnostic skills in a world where markets and technologies are constantly changing, developing the ability to quickly characterize both the common and the distinctive elements of business problems. They develop leadership skills by learning to make difficult decisions with limited information and significant uncertainty, as well as learning to
cope with ambiguity. They enjoy a safe environment in which to learn other skills critical to business success: the ability to persuade and inspire others, reconcile differing viewpoints, prioritize objectives, and identify and capitalize on opportunities. Over time this builds a strong commercial frame of reference, along with a broadened perspective. In summary, “a steady diet of cases leads to distinctive ways of thinking—and acting” (Garvin 2003: 61).

2. Critique

All theory presents a simplified abstraction of processes in the ‘real’ world, and in the process of simplification, violence is necessarily done to its complexity and multi-faced nature (Webb 1995). Still, as Kurt Lewin said, nothing is as practical as a good theory, and to structure my critique I have chosen an insightful framework developed by Lane and Maxfield (1997). To start with, any business domain may be construed as a space consisting of agents (including firms, teams within firms, customers, trade associations, and so on) and artifacts (objects or services designed, produced and exchanged by economic agents), structured by various relationships: between agents, between artifacts, and between agents and artifacts. ‘Vision’ and ‘mission’ together determine a firm’s directedness in agent/artifact space by selecting a particular kind of artifact that the firm commits itself to create, identifying the kind of agent(s) to whom the firm intends to sell these artifacts, and establishing the directions in which the firm would like the current structure of agent/artifact space to change. ‘Goals,’ on the other hand, specify the desired outcomes for the firm: resources, financial or social returns, or particular reconfigurations of agent/artifact space; while ‘tactics’ determine how the actions in which the firm intends to engage will actually be executed by its various component agents. ‘Strategy’ lies
between directedness and execution in that it lays down ‘lines of action’ that the firm intends to initiate and that are supposed to bring about desired outcomes. Since outcomes depend on the interactions with and between many other agents (inside and outside the firm’s boundaries), strategy is fundamentally an attempt to control a process of interactions, with the firm’s own intended lines of action serving as control parameters. But how much control is achievable, and how to achieve it, depends upon the ‘foresight horizon’: how far and how much can be foreseen.

When the foresight horizon is clear, all the consequences of any possible course of action, including the responses of all other relevant agents, may be anticipated, permitting the strategist to chart out a best course that takes account of all possible contingencies. This is the classical conception of strategy as ‘optimizing precommitment.’ When foresight horizons become a little more complicated, control can still be exercised from the top down in a predetermined fashion, even if ‘adequate’ must substitute for ‘optimal’. But as the foresight horizon becomes even more complicated, is becomes impossible to map out courses of action that guarantee desired outcomes, and strategy must therefore include provisions for actively monitoring the world to discover unexpected consequences, as well as mechanisms for adjusting projected action plans in response to the unexpected. Strategic control is no longer exercised exclusively from the top-down, but distributed among multiple agents.

I contend that the ‘distinctive ways of thinking and acting’ inculcated in business school students via a steady diet of case analyses are really only suitable for clear foresight horizons in which optimization techniques may be deployed to choose from a set of already-specified alternatives based on an evaluation of the value and the probability of their consequences.
Lane and Maxfield draw an analogy with the eighteenth century general perched atop a hill overlooking the plain on which the battle will be fought at dawn. Our general is able to clearly discern the features of the landscape and the cavalry and infantry positions on both sides; and though he cannot exactly predict the outcome of the orders given, the subsequent battle movements or various contingencies, he can be reasonably sure that one of a few scenarios already envisioned will come to pass. The time horizon of relevant uncertainty has a clear terminal date (tomorrow, when the battle will be fought and either won or lost); and, the general is knowledgeable of all the relevant possible consequences. He knows what he is uncertain about: not only the ultimate winner, but also what will determine the outcome: how troops move, how they engage the enemy, and the terms and conditions of engagement.

The conventional case study puts students in the boots of the general on the hill. They study and makes sense of the business landscape and its likely evolution (‘situation’, ‘questions’); formulate an idea of the optimal strategy given the situation at hand (‘hypothesis’); gather supporting evidence to develop a battle plan (‘proof and action’), which, if it survives the due diligence phase (‘alternatives’), gets the green light. The time horizon of relevant uncertainty has a very clear terminal date (e.g. next week’s board meeting) and while there is uncertainty built into each case, the protagonist knows what he or she is uncertain about, since there is always sufficient information on which to base conclusions.

There is growing consensus among leading practitioners that this kind of situation represents the exception rather than the rule. Humans are planning creatures and the future is never something that is vacuous or empty, but filled with expectations, hopes and fears, and corresponding strategies to maximize or minimize them (Webb 1995). Nevertheless, when a
firm’s ‘foresight horizon’ is more complicated, constraining how far ahead and how much we can see, then the old notion of strategy as an optimized precommitment to a particular course of action no longer makes sense. Today’s decision maker is more likely to face a situation akin to that faced by a commanding officer of a U.S. cavalry column marching through an uncharted section of Montana in the early 1870s. Unlike the general atop the hill, our commanding officer doesn’t know the landscape, the positions, capabilities or likely movements of the enemy. He knows the general direction he wants to take his men, but scenario building is fraught with issues because there are simply too many possibilities (geographical, social, meteorological, etc) for the unexpected to happen. He relies instead on his scouts to keep him informed about what lies just beyond the horizon, and he is confident that based on past experience, he will recognize whatever situation he encounters and take the appropriate action. His time horizon of relevant uncertainty is less clear (it could be a matter days, but also possibly a weeks before he reaches his destination) and while he could probably list the variables relevant to the completion of his mission, this would amount to a very long list and most of the items would probably end up not mattering anyway.

Because of the limited knowledge of relevant possible consequences or the time horizon of relevant uncertainty, Rajiv Dutta (former president of eBay marketplaces, Skype and PayPal and Executive in Residence at the Peter F. Drucker and Masatoshi Ito Graduate School of Management) recommends we abandon the traditional approach to strategy, based on building detailed scenarios of the future and planning for alternatives based on sensitivity analyses. “Luck beats strategy any day,” he says. “A far better approach is to maximize your chances of luck. Execute against a variety of promising avenues. Open the company to information from
outside. Stay close to start-ups in your industry.” (Darroch 2010: x).

Entrepreneurs typically face a foresight horizon that is orders-of-magnitude more complex than that of the commanding officer. Unpredictable and rapidly changing (Lichtenstein, Dooley, & Lumpkin, 2006), theirs is a world under active construction. To paraphrase Lane and Maxfield, they are part of the construction crew, but there isn't any blueprint. The cavalry commander must negotiate a landscape of presently unknown features, but at least the landscape is relatively fixed. The social landscape through which entrepreneurs move, on the other hand, is in constant flux as it deforms in response to the actions that they and others take; as new and often unforeseen agents appear in the unfolding drama, and as the boundaries between them are reshuffled. This environment is characterized by complex crosscutting networks of collaborative and competitive relationships—although the allegiances are constantly shifting and aren’t always clear. Furthermore, the artifacts around which economic activities are organized (tangible objects and intangible services) are hard to categorize. Indeed, their very identities may be up for grabs.

In the entrepreneurial domain, more is changing than the structure of its agent/artifact space. As Lane and Maxfield point out, what’s also changing are the ways in which agents perceive their own and each other’s functionality, i.e. who does what, to and with whom and what. As the entrepreneurial spirit penetrates traditionally stable domains, incumbent agents who once had the luxury of acting like generals are forced to become more like cavalry commanders. US energy utilities, for example, are being compelled to rethink their entire business models because of a wave of new innovations, and must decide whether to remain energy providers or get into the data management business.
To complicate matters, agents must not only interpret what’s in front of them, but also reinterpret many things that were previously regarded as fixed, but whose character has been changed by their relation to emergent features. Since their destination is always temporally beyond their current foresight horizon, the connection between what entrepreneurs do and where they are going is always tenuous and thus ambiguous.

What does it mean to act rationally in the face of a complex foresight horizon, when the very structure of the firm’s world is capable of undergoing cascades of rapid change? In contexts like this, the relation between strategy and control is very different from the classical conception implicitly taught via the case method. Strategy is not a plan to assert control, explain Lane and Maxfield, but a process to understand and leverage it. Strategy can thus be thought of as a set of practices—partly exploratory, partly interpretative, and partly operational—that can generate insight into the structure of the relevant agent/artifact space and how control is distributed through that space, and guide meaningful action.

The implications are twofold:

(1) Cognitively, agents should construct a representation of the structure of their world that can serve as a kind of road map on which to locate the effects of their actions. Since what is happening results from the interactions between many agents, all responding to novel situations with very different perceptions of what is going on, interpretation and reinterpretation at every locus of distributed control is essential. Lane and Maxfield call this task ‘populating the world.’ But this intelligent sense-making function is just the first step.

(2) Structurally, “Agents act—and they act by interacting with other agents. In complex
foresight horizons, opportunities arise unexpectedly, and they do so in the context of generative relationships. In this context, the most important actions that agents can take are those that enhance the generative potential of the relationships into which they enter.” As new opportunities emerge from these relationships, agents must learn to set aside prior expectations and plans and follow where the relationships lead (as Rajiv Dutta puts it, “Execute across a variety of avenues”). While there will be regions of relative stability in a firm’s agent/artifact space when it still makes sense to engage in optimizing (or at least satisficing) pre-commitment and to organize processes of exploration and adaptation, it is difficult to know where those regions are, or to which relationships pre-committed actions may be entrusted, without the sense-making and relationship-building practices described above.

David Noer, emeritus professor of business leadership at Elon University, argues that we are doing to our students what automobile manufacturers did to their cars; rendering them ineffective by operating according to an outdated model that is no longer relevant to the environment. The conventional case study operates according to an outdated view of strategy as a plan to assert control. Its unit of analysis is a decision situation at a particular point in time, which fails to capture the structurally emergent, cognitively ambiguous and perpetually novel nature of far-from-stable business domains. Furthermore, it provides very little insight into the cognitive and structural processes described above—how agents make sense of the world around them, and foster generative relationships. The method as currently practiced is therefore of questionable use, especially to the increasing number of students with a burning
ambition to build something innovative from scratch that makes a meaningful impact on society. Because they are going to be facing the most complex foresight horizons imaginable, they need deep insight into the entrepreneurial process, i.e. how the entrepreneur navigates the agent-artifact space. What is their general approach and philosophy of life? How do they make and learn (or fail to learn) from mistakes? How do they persevere? What strategies do they employ? What role do change and serendipity play? When and why do they choose or are forced to put things on ice, or even give up? Students need to understand why, facing the same economic circumstances, some entrepreneurs get through the knothole, survive and succeed, whereas others founder.

Business schools, argues Roger Martin, have produced a generation of graduates with an overdeveloped sense of the power of their models and an underdeveloped sense of their limitations (Martin 2009). This may be true, but the same criticism might be leveled at their teachers. Karl Popper distinguished between the ‘bucket’ theory of knowledge and the ‘searchlight’ theory of knowledge, arguing that there can be no observation without self-conscious perception, and no perception without a prior theoretical expectation (Webb 1995). Our outdated model of strategic decision-making, developed at a time of clear foresight horizons, has led to the false belief that an issue is only worthy of attention if it is big enough, and there is sufficient certainty with respect to inputs, options and choices. This has blinded us to a crucial fact about non-linear systems: their sensitivity to small and subtle changes in initial conditions (for example, the chance encounter in an aircraft which sows the seeds for some global enterprise). Because we are not looking for them, the vast majority of small yet often significant changes escape our attention. But then again, if our data set consists only of a
couple of interviews, supplemented with a mass of secondary data, then capturing the subtleties of the entrepreneurial process is impossible in any case.

With a change of theoretical framework, and a corresponding change of methodology—one that is longitudinal rather than cross-sectional, one that favors real-time content generation over retrospective storytelling, and one that captures the emergent nature of business as a complex adaptive system—we may begin to build a new foundation for the case method, one that better describes reality. But re-alignment may not be enough. What’s needed—and what more and more students also seem to want—is engagement. By making engagement with real firms facing real problems an integral part of the case experience, students can gain valuable first-hand insights into the sense-making, relationship-building and value-creating practices of contemporary organizations. The following section reports on the pilot test of ‘Case 3.0,’ a nascent social enterprise whose aim is to bring the case method into the 21st century by rethinking its purposes, means of production and orientation to the world.

3. **Case 3.0**

Whereas ‘Web 1.0’ was about static one-way communication and ‘Web 2.0’ was about dynamic two-way communication among the general public, ‘Web 3.0’ is all about professionals taking the lead in content generation (Whitehead 2008). Content generation is the first stage in the Case 3.0 model (see Figure 1).\(^1\) Specifically, entrepreneurs generate content in exchange for focused research conducted by MBA teams that help them solve practical business problems. These teams are supervised by professors, who are matched with entrepreneurs, preferably in

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\(^1\) In November 2009 the Case 3.0 concept was presented at the annual Satter Conference on Social Entrepreneurship held at the Stern School of Business, New York University.
the same locale. Content is gathered over a period of weeks or months. Going into the pilot study, which commenced in January 2010, we did not specify a particular method or frequency of data collection, nor did we put constraints on the topics to be covered or questions to be answered, preferring instead a culture of open-ended experimentation. The expectation was that through a process of trial and error, some approaches would be retained or modified and some would be ruled out. All content is uploaded to the password-protected cloud content management service called box.net, and is accessible 24/7 by all parties.

Figure 1: Case 3.0 model

In the second stage (now in progress), raw content is cleaned up, imported into a purpose-built digital template capable of holding any type of data (text, documents, transcripts, podcasts, videos, etc), and woven into a narrative co-written by professors and Case 3.0 researchers. The idea is to break down the narrative into discrete study units, each spanning a
defined period of time (e.g. January-February 2010), each of which will be accompanied by questions for use in an educational setting, as well as a brief Teaching Note. As time goes on, more study units may be added, and even after the ‘Live Case’ is closed, there may be periodic updates. This is not only to maintain relevance and interest, but also to enable professors to compare ‘what was planned’ with ‘what actually happened,’ which is of educational value.

Accompanying the live case is a ‘Base Case’, whose objective is to bring students and professors up to speed on the firm (its founding, history, vision, goals, objectives, strategies and tactics) and industry (definitions of terms, history, competitive structure and various political, economic, social, technological and ecological drivers). Content for the Base Case may consist of internal and external secondary sources (subject to copyright laws), as well as primary research with various stakeholders. Like the Live Case, the Base Case may be periodically updated to ensure relevance.

The plan is to distribute cases through a dedicated web portal. A percentage of sales will fund case development at business schools in developing countries. Robert Zoellick, World Bank President, recently observed that we are seeing a shift towards a new multi-polar global economy, with better prospects in developing countries than in developed ones. Yet there remains a deficit of cases from within these economies, and furthermore, they are produced by a relatively small number of schools. A core premise of Case 3.0 is that content generation should be decentralized to capitalize on the local knowledge, connections and expertise of

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2 Professors will be able to amend the list of questions for each study unit, customizing them for their specific needs. Students may be asked, for example, to relate the case to an independently assigned reading.
professors on the ground, anywhere in the world. This is not only to build up a critical mass of cases, but also to build grassroots entrepreneurial capacity where it is most needed.

The first complete case will be beta tested in fall 2010 by a small group of professors. The objective is to obtain feedback on the approach and ideas for improvement. From there it will be possible to develop an active, purposeful, interrogative and structured approach to case analysis using the new approach.

4. **Pilot Study**

Commencing January 2010, the pilot phase has tracked the five real-world cases, described in brief below.

**Ocean Energy Systems:** OES is a nascent wave energy company that has completed sea trials of a first-generation 40-meter prototype over nine years and is currently seeking funding for a second-generation ‘Wave Energy Converter’ (WEC). According to company documents, an investment of approx $10 million in year 1 may yield 5-year accumulated net profits of $52 million after tax. Under certain conditions, each WEC is projected to generate 250,000 gallons of potable water/day; or, enough electricity to meet the daily needs of 6,000 people. However, while the principle of converting kinetic to mechanical energy had been proven, not a kilowatt of electricity or an ounce of water had been produced, which because it became an issue for investors, plunged the company into the ‘Valley of Death.’ The other factor working against the company was that no one has yet made any money in wave energy, and the path to profit is still far from clear. When we began tracking this case in January 2010, the company was preparing
for a business trip to Ireland to meet with the government, contractors, investors and others—an example of what Lane and Maxfield call ‘fostering generative relationships.’ What follows is an excerpt from an interview conducted with Mr. Cunningham shortly upon his return.

**Q:** President Obama recently pledged $8 billion dollars for new nuclear reactors, and he also stressed the need to invest in other carbon neutral energy technologies. But it seems that wave energy isn’t even on the radar here in the U.S. What are you planning to do to draw attention to this untapped opportunity?

**B. Cunningham:** Unfortunately, your observation is absolutely correct. One of the big problems that we face in the wave energy industry is that it’s not on anybody’s radar screen. The industry hasn’t achieved commercial success yet, even though the idea has been discussed since Archimedes’ time. There are records of Archimedes attempting to harness wave energy. Nobody has made a commercial success of the product, and that’s why it’s such an opportunity and such a big challenge. There simply is no wave energy industry at this point for venture capitalists to see that there truly is a profit opportunity here.

Just last month The Wall Street Journal quoted some data from Bloomberg New Energy Finance saying that as of the fourth quarter 2009, wave energy is the most expensive energy source, leaving subsidies out of the equation. That’s compared to coal, natural gas, biomass, solar, onshore and offshore wind, biomass, geothermal and others. They said wave energy costs between $250 and $500 per megawatt hour to produce, with the likeliest cost being about $375 per megawatt hour. Well, we conservatively project that we can produce for $75 per megawatt hour, which is an order-of-magnitude reduction. Now we need to get that message across, so wave energy isn’t prematurely written off.

At my former company, a public computer company, we were competing with IBM, NCR and Burroughs, and it was much easier for us to demonstrate the potential for success. This is because everybody already knew how well those companies were performing. A new company need only show how it could carve out a niche by offering more “QIV” [Quality, Innovation and/or Value], with 20% greater success, and investors would come running. But in the wave energy industry, investors have no such reference point, by which I mean companies making money consistently over three to five years. It hasn’t happened yet. A big reason is that engineers have tried to build far too complicated systems for one of the harshest operating environments in the world – the sea!

I was on a submarine for three years and I can tell you from personal experience that even at 400 feet below the surface you’re tossed around quite a bit. The ocean is terribly powerful and terribly corrosive, so the product that’s going to win must be simple, must be robust and must be capable of withstanding this environment for 20 years. Keep it simple and robust is our
answer! In fact we unintentionally proved this during sea trials of our first generation 40-meter prototype. During one trial, someone doing routine maintenance left a hatch open in the center section. It filled up with water and the entire unit sank to the bottom of the sea. Three months later divers were sent down to pump out the water and bring the unit back to the surface. And amazingly, after that ordeal, the unit still worked, still was able to convert kinetic to mechanical energy. That’s robust for you!

Relationships only bear fruit when they lead to concrete commitments. This came in the form of a preliminary take-off agreement from Energia, Ireland’s largest independent supplier of energy, with a potential value of €1m annually for each WEC over its 20 year operating life. MBA teams assigned to this project performed an analysis of global investments in wave energy from 2008-2010 (this data was incorporated into a presentation to a potential investor), surveyed published reports on wave cost of energy versus other energy sources, surveyed published cost of energy calculations (wave versus competing sources), and explored the potential for wave energy in China (also taking advantage of Chinese expertise on the team).

Content generated by the CEO, Brian Cunningham, was gathered via periodic in-depth interviews, supplemented with company documents. Mr. Cunningham’s preferred approach was to jointly work out the interview questions in advance. An experienced entrepreneur, during each interview he also took pains to draw out general business principles, such as ‘go where the pain is’ (for example, Ireland is under pressure to meet mandatory EU targets for renewable energy production and views wave energy as a key component of its strategy). The base case for OES will serve as a primer on global warming, energy consumption, energy policy, renewable energy, wave energy (technology, competition, etc), and the founding and history of OES.
Worrell Water Technologies: Established in 1993, Worrell produces the Living Machine®, a nature-inspired system that uses living plants and beneficial microorganisms to turn wastewater into clean water that may be recycled for irrigation, sanitation (e.g. toilets) and other on-site uses (industrial, agricultural, acid mine drainage, storm water, landfill leachate, and urban and airport runoff). The system is cleaner and greener than conventional water treatment methods, with significant savings in energy and infrastructure costs. However, artificial wetlands represent but a small fraction of the wastewater treatment industry. What Worrell wanted—but didn’t have the resources to produce itself—was a study of the forces working for and against the development of a sustainable wastewater treatment infrastructure (such as the green building movement), a competitive analysis using criteria worked out with the client, and an exploration of emerging innovations in the constructed wetland sector (patented, prototyped, commercialized), including portable constructed wetland systems.

Much of the content for the base case was gathered during interviews with and presentations by executives and engineers, which gave students unique insight into how agents make sense of their domain and foster generative relationships with customers, municipalities, trade associations, state and federal agencies, universities, investors and communities. Additional resources have been provided by organizations such as the Water Environment Research Foundation (WERF), the U.S. Environmental Protection Agency and the Decentralized Water Resources Collaborative. For example, WERF’s Decentralized Wastewater Stakeholder Decision Model (Excel spreadsheet) educates students on the ‘triple bottom line approach’ and gives them an appreciation for the trade-offs that have to be made when choosing from various wastewater options for a community. A thoroughly researched base case thus serves as a
‘Trojan horse’ for getting critical environmental and other issues in front of students. This aim is broadly consistent with The Principles of Responsible Management Education recently developed by The UN Global Compact with input from The Association to Advance Collegiate Schools of Business, The European Foundation for Management Development, The Aspen Institute, the Globally Responsible Leadership Institute, The European Academy of Business and Society, and Net Impact (United Nations Global Compact 2008).

**NW Works:** Now in its 40th year, NW Works employs people with intellectual and/or physical disabilities, either in-house or via placements with local employers. The agency recently received a $1m federal stimulus grant and is in the process of retrofitting a 58,000 sq ft facility complete with autism center. MBA students working on this project developed a marketing plan to grow take the nascent paper and CD shredding business, and explored potential sources of employment for the new facility (baking, weaving, gardening, woodworking, etc) that have proven successful elsewhere. To this end, a field visit was made to Innisfree, a similar community in central Virginia with established programs in place. One of the lessons of this case is that social enterprises have different goals from conventional enterprises, and that is takes time to perfect a business model. For example, Innisfree’s bakery, which serves Charlottesville, substituted fresh baked bread for granola because the demands of producing a quality, standardized product in a timely fashion was too stressful for its co-workers. The case also provides an opportunity to address stereotypes about intellectual disabilities, and open students’ eyes to employment opportunities, challenges and rewards in this sector. Content has been generated mainly through interviews with John Brauer, CEO. What has proven
particularly instructive is to compare the progress of the agency against its strategic plan, documenting how the management team and board of directors make corrections, not only to their operations but also to the plan itself, in the process fine-tuning their business model—a process discussed at length by Mullins and Komisar (2009).

**Mathalicious:** Mathematics education is in crisis because children lack the motivation to learn. Abstract procedural rules leave them asking, “what does this mean?” and “why am I learning this?” However, broader contextual factors may also play a role in shaping attitudes to learning.

In their book *Identity Economics*, for example, Akerlof and Scranton (2010) argued that people’s identity—their conception of who they are and of who they choose to be—are not only important determinants of achievement but may also be strongly influenced by social norms.

Founded by Karim Logue, a former math teacher and math coach, Mathalicious brings meaning and context to math through creative real-world applications. For Case 3.0, Mr. Logue is producing a series of insightful podcasts charting his progress across a number of fronts, including product development, business model development, board recruitment and market development. The following podcast excerpt (March 21, 2010) captures Mr. Logue’s thoughts on the board of directors and the nascent business plan:

“As I remember in the last video, I was talking about how I considered myself a math teacher and sort of felt as though I was having to—force upon myself this mantle of businessperson in order to manifest Mathalicious. To some degree I still feel like that although this past month and a half really has been exclusively about business, so let’s hit some of those. So a status update: since we last spoke, I have started to put together the board of directors, and they really are a very hard-hitting, deep-bench group of people that include marketing specialists, people with strong relationships with school districts around the country; one in particular a really hard-hitting educational consultant; a friend of mine who works for Ideo, and whose an expert in user interface which is going to be really useful going forward as we develop the
content for multi-platform—not just web but also iPad and whatever else; someone whose an expert in online learning, and then the head of the board who was a former president of Toys R Us and who has just an incredible amount of executive experience that is really going to benefit Mathalicious—not only executive experience but he is also the most positive Scotsman I’ve ever met, and his joviality is good in and of itself. So the board of directors is coming along—couple of spots I still want to fill but I want to be diligent and conscientious about that. Last week I finished the first draft of the business plan, which was a very useful process for me to put everything on paper, to commit myself to a real strategy and timeline—and also really to consider the revenue streams. Right now we’re giving content away for free, which obviously is not sustainable.”

The Mathalicious case provides unique insights into ‘entrepreneurial affect’—the impact of feelings and emotions on cognition (something excluded from Lane and Maxfield’s model).

Based on an extensive literature review, Baron (2008) posited that affect influences many aspects of cognition and behavior; that such effects may be especially likely to occur in the domain of entrepreneurship because the environments in which entrepreneurs operate are unpredictable and uncertain and because affect influences many of the tasks entrepreneurs perform in launching new ventures (such as opportunity recognition, acquiring needed resources, and the capacity to respond effectively in highly dynamic environments). The following podcast excerpt (April 14, 2010) captures the struggles facing this social entrepreneur as he tries to reconcile his personal goals with those of investors.

“Not much has happened businesswise since my last entry. I’m still refining the business plan, which I’ll get to in a moment. I continue to develop content, and earlier this week Teach for America began promoting Mathalicious to all of its core members and alumni. This weekend I’m heading to San Francisco, and next weekend will attend an entrepreneurship workshop at the Stanford Business School. I’ll also be meeting with various ed-related organizations including Inkling, a start-up that digitizes educational content for devices like the iPhone and the iPad. In my first conversation with them, they expressed interest in potentially incorporating Mathalicious into their fold, which would certainly facilitate the distribution model, and provide for e-learning much earlier than I’d expected, but right now I’m not sure of the details, or whether it would make sense more generally.
But indeed all of this—the business plan, marketing—it’s all just ... details. Last night I watched a NOVA documentary on other galaxies. Someone forwarded me an old Carl Sagan video on earth and its relative insignificance. These are good reminders. I’m good at writing math lessons. I’m bad at a lot of things. But I’m very good at this. I approach a math lesson the way I imagine Michelangelo approached the Sistine chapel. How much did he get paid for that? Do you have any idea? Maybe he did it for free, who knows. The thing is, it exists. He is gone, but it exists. And that’s what I’m really struggling with right now. In the business plan I specifically said that profit maximization was not the goal; that the mission was to influence education as far and as widely as possible, but of course once you get private investment, do you really get to make those calls?”

One of the MBA teams assigned to this case conducted two focus groups at local middle and high schools to explore teacher perceptions of mathematics education and the Mathalicious concept, and also identify potential barriers to adoption. The high school teachers lacked confidence in the Standards of Learning, and while they were interested in alternative materials, their schedule permitted little time for experimentation. Some of the middle school teachers, on the other hand, had abandoned their textbooks (which are written to Texas and California standards), revealing an opportunity for Mathalicious to develop materials specifically for Virginia teachers. They were enthusiastic about what Mathalicious had to offer and made recommendations for improvement, including choosing more relevant real-world applications (celebrities, sports, shopping) and building greater interactivity to the lessons.

**Amandla Awethu Africa:** Amandla Awethu Africa (named after the rallying cry of the South African freedom fighters) is a nascent social enterprise pioneering a holistic, sustainable approach to African agricultural and community development. In January 2010 co-founder Daniel Isner summarized the philosophy thus:

“Long-term success is dependent on numerous factors. The most important of which is the willingness of people to trust each other and work together. Cooperative industry is in many ways a revolutionary step forward. Our holistic, grassroots approach strives to prioritize our initiatives in phases to ensure that the needs of the community are being addressed. Continual dialogue with community leaders and youth is essential to our success. Simply providing an institute to mentor and encourage sustainable growing practices, alone, will not be able to
empower a community. Projects must be economically viable, communities must benefit
directly, families will have to be encouraged to engage in its development, and foreign
volunteers must respect and understand the needs and desires of the community. With this as
our foundation, Amandla Awethu Africa has begun the process to build the Crimson Dawn
Center in Ghana.”

However, establishing this center proved more difficult than he had anticipated. A few weeks
later Mr. Isner wrote:

“Formally, we had focused our efforts on acquiring land in Amfaso, Eastern Region. Due to
complicated familial issues regarding the proposed project site, we've made the decision to go
back to the drawing board and conduct project feasibility studies in other areas. Since coming
to Ghana, I have learned that familial disagreements regarding land ownership determine the
complexity of land acquisition. For example, when a grandfather or family head passes away,
there are often quarrels between surviving family members on land rights and borders. Such
was the case in Amfaso. Unfortunately, these kinds of challenges are by no means uncommon
in Ghana. So, as mentioned, we are currently looking at all our options.”

For several weeks Mr. Isner toured Ghana, investigating potential farm sites and
producing video reports from the field. At the time of writing, he is still looking for a suitable
site. The organization recently reached a major milestone, obtaining 501(c)(3) status from the
IRS. Two MBA student teams are working on this project; one researching web-based non-profit
fundraising strategies, and the other best practices in organic agriculture, drawing on case
studies from Tanzania, Ethiopia and other African nations. This case reiterates the importance
of sense making and fostering generational relationships, but this may be easier to do in theory
than in practice.

While there have been relatively few empirical studies of decision-making in nonlinear
settings, in their experiments Richards & Hays (1997) were surprised at the extent to which
players could not figure out the simple response rule of the opponent, whose signal appeared
to have been confounded by a complex environment (probably accentuated in Amandla’s case
by cultural differences). Following Charles Lindblom, these researchers also found that the best strategy in complex and unknown environments, where ramifications of actions are unclear and may be sensitive to small changes, is incremental search—precisely the strategy Mr. Isner has adopted. “In short, when navigating any nonlinear environment,” these researchers state, “the basic rule of navigation applies: attempts to paddle in a swift and complex current just amplify the current’s effects and may result in a loss of control. Much more effective are small adjustments informed by longer periods of observation.”

5. Discussion

What’s missing from the Case 3.0 approach is a standardized protocol for data collection. To reiterate, facts are not just waiting to be picked up; it is theory or expectation that guides perception and hence observation. However, the theoretical basis on which to proceed is not fully clear. Should each entrepreneur be left to choose their own principle of selectivity with respect to the real world, based on what’s important to them (as practiced by Karim Logue and Daniel Isner)? Should issues, topics and questions be agreed upon by researcher and entrepreneur (as practiced by Brian Cunningham and John Brauer)? Or is there a middle position, which would set guidelines and metrics that merely direct what is worth paying attention to? The latter is attractive in the sense that it allows for equivalent cases (a prerequisite for theory-building), while also preserving the pluralism that Kuhn would argue is a source of strength and richness.

Unfortunately, the case method as currently practiced leaves little room for theory. Perhaps this is because theory idealizes by abstraction and is therefore not ‘practical’ enough.
This is a missed opportunity since theory is of value not just as an intellectual activity in its own right, but also as a means to make sense of the world at a time of rapid and continuous change, and may help in the development and achievement of practical business objectives. The case method as currently practiced also leaves little room for academic researchers to get more exposure to the real world, which is a missed opportunity to develop more useful theories.

Academics and practitioners may have more in common than meets the eye. As we have seen, strategy in complex environments is not about optimized precommitment but informed trial and error (“maximize your chances of luck,” as Rajiv Dutta put it). This has parallels with the scientific doctrine of falsification, which holds that we can never know with certainty what is true; only what is false. The process of science is thus the progressive elimination of what is false through trial and error, with the intention of bringing us ever nearer to the truth.

One way of bringing the academy and industry closer together is to bring theoretical ideas from a wide range of disciplines directly to bear on each case study (i.e., as part of the Live Case or Base Case), which would help make sense of observed events and processes. This step would also benefit the research community, since progress is more likely to be made when there is a healthy competition between theories or research programs, the premise being that the assessment of any one theory or research program (such as the complexity-based perspective used in this paper) cannot be adequately done from within that perspective (Webb 1995). The case method as currently practiced illustrates the dangers of self-confirmation (i.e. selecting facts that confirm a chosen theory), which might be avoided by introducing greater theoretical eclecticism. Various social media could be harnessed to facilitate the healthy exchange of ideas.
6. Conclusion

Lakatos’ criterion of ‘fruitfulness’ holds that our theories should not only be assessed according to where they have been and what they have explained, but also in terms of where they are going and what they are stimulating (Webb 1995). In this respect the inherited assumptions about strategic decision-making, which have shaped not only case analysis and discussion but also selection and production, are found wanting. To understand the world more fully we need to go to a different kind of analysis, one more dependent on how agents perceive, assess and navigate the world within which they are acting. Based on the pilot study, Case 3.0 shows promise as a means by which to re-align the century-old case method with today’s world, a world in which complex foresight horizons have become the norm. A more longitudinal, granular approach, which more evenly distributes the burden of content generation among researchers, entrepreneurs and other stakeholders, may yield deeper insights in the cognitive, structural and other dimensions of the emergent entrepreneurial process. The proposed approach rests on the principles of reciprocation (entrepreneurs generate content in exchange for actionable research and fresh insights into pressing problems), decentralization (content generation is pushed to the periphery to take advantage of local knowledge), dynamism (digitization enables continuous updating), collaboration (cases become a vehicle by which to bring the academy and real world closer together for mutual benefit) and social action (more than a pedagogy, the case method also may be a catalyst for building entrepreneurial capacity in the real world). The immediate challenge is to standardize the process to ensure equivalency between cases, thereby establishing a firm foundation for teaching and theory building.
References


**Case 3.0: The Pilot Study**

**Principal Topic & Research Question**

The question is no longer whether entrepreneurship can or should be taught, but rather how to continually improve its content and delivery to meet the needs of our current students (Gendron & Greene, 2004). This paper reports the findings of a pilot study whose aim was to test and refine the operating principles of ‘Case 3.0,’ a proposed web-based method for learning entrepreneurship in which entrepreneurs themselves generate much of the content using multiple modalities (video, interviews, voice-to-text software, written reports, etcetera). The objective is to improve the quality and integrity of information by reducing retrospective bias and revealing entrepreneurial processes – what Sarasvathy (2008) calls the “microfoundations of entrepreneurship” - that until now have been largely hidden from researchers. Specifically, the pilot study sought to shed light on the following research question: how can Case 3.0 become a win-win solution for entrepreneurs, students, professors, experts and other stakeholders?

**Methodology/Key Proposition**

This study drew upon two related bodies of knowledge to develop the conceptual framework. First, in the pragmatist tradition, theories of effectuation, improvization, bricolage and combinations thereof. Second, in the process philosophy tradition, perspectives from the emerging Process Organization Studies (POS) school. Our basic proposition is that entrepreneurial education would benefit from a shift in emphasis, from examining entrepreneurial decisions at a snapshot in time, to a more in-depth and longitudinal approach able to capture the entrepreneurial process in all its complexity.
Data for this project was generated by tracking the evolution of five entrepreneurial ventures commencing January 2010: (1) Ocean Energy Systems (early-stage wave energy technology), (2) Living Machines (ecological solutions to wastewater management), (3) Amandla Africa (sustainable development, food security), (4) NW Works (employer of persons with disabilities), and (5) Mathalicious (creative solutions to K-12 math education). Graduate students in two MBA classes participated in the study, each given specific research assignments.

**Contributions**

This research makes three specific contributions to research focusing on the principles of effective entrepreneurship education. First, it provides insights into the value of making entrepreneurs, professors, students and experts, co-creators of case content, and the practical challenges in doing so. Second, it provides insights into the functional requirements of the web-based interface planned to manage and extract value from all this data. Third, it opens up new avenues for research at the nexus of entrepreneurship and pragmatist and process philosophies.
Success profiling of students in entrepreneurship and small business management: a methodological perspective on the interactive nature of success predictors on student performance at an open and distance learning institution

Elana Swanepoel, Hélène Müller and Andreas de Beer

Abstract

This study evaluated the interaction effect of satellite classes and additional, potential success predictors on academic performance of first-year students, by applying the Chi-square Automatic Interaction Detector (CHAID) methodology. This decision tree methodology described the interactive driving forces (satellite class intervention and biographical student attributes) that impacted on student success. The CHAID analysis enabled the profiling of successful and at-risk students. The decision tree algorithm mimics true life situations where various effects interactively and jointly influence and predict an outcome. The results showed that the critical interacting nature of satellite class attendance and additional co-predictors, such as population group and type of matriculation certificate, considerably strengthened performance prediction.

Introduction

The success rate of first-year diploma students in some courses in the Department of Business Management at the University of South Africa (Unisa), an open and distance learning institution (ODL), is of great concern. An unacceptably low pass rate of between 40 and 50 percent in the courses Business Management I and Management I was reported between 2003 and 2007 (Swanepoel, De Beer, and Müller 2009). Student failure is costly to both the institution (in terms of eventual throughput rate and associated subsidy quotas) and the students (in terms of time and accumulated study expenses). The added financial burden is often carried by overburdened parents, sponsors or the students themselves incurring escalating study loans. The
financial implications for South Africa, as a developing country in need of a skilled workforce, are thus pertinent.

Student academic performance at ODL institutions, as at residential universities, is linked to student-lecturer knowledge communication and interaction (Ansari 2002). In an attempt to increase students’ academic performance, satellite classes, as a blended learning component (Marx 2007), were investigated and implemented by the relevant department in 2006. Satellite classes mimic physical face-to-face student-lecturer tutoring and interaction by means of a series of networked, virtual real-time verbal communication and tutoring sessions. Satellite classes are costly to Unisa and return on the investment therefore has to be continually evaluated.

In the evaluation process, success-indicator measures had to be defined. Improvement in students’ examination or year marks or the pass/fail ratio of students attending and not attending satellite classes could act as success indicators.

The effectiveness of the satellite class intervention can furthermore be evaluated with different analysis methodologies. For example, in an initial analysis strategy, the research objective could focus solely on determining whether satellite class attendance significantly improves student performance. The same authors (Swanepoel et al 2009) conducted research to this effect in 2009. The rationale followed in this approach is that research into intervention effectiveness should not continue if the intervention per se does not prove to be effective. Once the effectiveness of the intervention has been established, a subsequent analysis strategy into the joint interactive effect of intervention and other success indicators should be followed. An in-depth analysis strategy should then recognise the fact that no single intervention or attribute influences an outcome (such as performance) in isolation. A combination of interacting forces
usually affects outcome. The research discussed in this article focuses on the analysis methodology applied during the second phase of the research project.

In the initial research by the same authors (Swanepoel et al 2009), determination of a pass rate and satellite class intervention dependency was formulated as the research objective. The analysis results of the initial study identified a statistically significant relationship between the attendance of satellite classes and the pass rate of students.

In the subsequent study, on which this article reports, the statistical significance was explored of the contribution of satellite classes in relation to the magnitude of the contributions of other predictors in jointly and interactively predicting performance success. The joint and interactive nature of predictors (which include satellite class attendance) modulating a success/failure prediction model became the main focus of the study. Student biographical information on population group, age, type of formerly traditional South African (SA) matriculation board certificate obtained, and language properties describe these predictors.

If the contribution of satellite class attendance in the joint/interactive prediction model proved to be substantial, initial research would be validated. Favourable results would furthermore strengthen research and justify tutoring expenses on satellite class implementation. The interactive nature of the analysis strategy has the added advantage of incorporating the effect of satellite class attendance into profiles of successful and at-risk first-year Business Management and Management diploma students.

Although ODL and the impact of satellite classes (not necessarily at ODL institutions) have been researched internationally (Collins 2002; Albright 2007; Zawacki-Richter 2009), limited research in this regard (except for previous research by the authors Swanepoel et al 2009), has been conducted in the field of Business Management at ODL institutions in SA. The
present research therefore aimed to fill the knowledge gap on the effect of the satellite class intervention on improved academic performance, while simultaneously eliciting biographical profiles of successful and at-risk first-year students. From these at-risk profiles, in particular, it should be possible to develop student support strategies to ensure an increased student pass rate.

The importance of psychographic and other possible contributing factors (such as student motivation, persistence, drive and other forms of support) was, however, not negated by this approach. These factors will be researched in the third stage of this continuing research project.

**Theoretical Background**

Unisa is rated the fifth largest ODL institution in the world, with approximately 280 000 registered students for the first semester of 2009 (Subotzky 2009). ODL approaches focus on opening access and flexibility to education and training, freeing learners from restrictions imposed by time, geographical disposition, socioeconomic and other constraints, and offering flexible learning opportunities to learners (Louw 2007). These approaches imply that learning and support are facilitated by someone removed in time and space from the learner and that student-lecturer knowledge communication is through an artificial medium (such as interactive satellite classes) (Moore, Perlow, Judge, and Koh 2006). The approach further implies that new patterns of virtual teaching and learning evolve when technology and traditional tutoring methods are intermingled in the learning process (Unesco 2002). Effective blended learning approaches that facilitate the pass rate and reduce tuition costs are vital to the sustainable growth of universities (Unisa 2009) following this tuition model. Satellite class intervention, the focal learning approach of the research under discussion, constitutes a blended learning technique.

The element of an artificial communication and support medium underlies the concept of blended learning and forms the essence of most authors’ definition of blended learning. The
Royer Center for Learning and Academic Technologies (2004), for example, defines blended learning as an ‘intermingling of multiple learning strategies or methods with a variety of (communication) media’. Markus (2008) agrees. Strategies or media would typically include aspects of face-to-face instruction and online (or distance) learning. Marx (2007) echoes Driscoll’s (2002) opinion that blended learning combines any form of instructional technology with face-to-face instructor-led training. Blended learning strategies have several distinct advantages which are conducive to performance, such as a sense of community among student learners (Garrison, and Kanuka 2004), exposure to open dialogue, critical debate, reflection and broadening of the learning experience. In developing countries such as South Africa, certain blended learning techniques, such as satellite classes, have the added advantage that the implementation cost of the strategy, in relation to the proportion of students who can be serviced by the teaching approach, is relatively low (Mathur, and Oliver 2007).

Although Oliver and Tigwell (2005) claim that blended learning increases student performance, Prinsloo and Van Rooyen (2007) point out that the successful introduction of a specific blended learning approach at one institution does not necessarily guarantee the effectiveness of the strategy at another institution. In selecting blended learning options, cognisance should be taken of the accessibility of the proposed strategy to students. A large proportion of the Unisa student population comes from historically disadvantaged backgrounds and often from remote rural areas with poor infrastructure (Visser, and Hall 2006). These logistic realities require serious consideration when the various types of technologies that are available to facilitate learning are evaluated.

External indicators and biographical characteristics (and combinations of these factors) that affect or predict academic performance translate into profiles of successful and at-risk students
(Wojciechowski, and Palmer 2005). Influential characteristics, the way they interact and their ‘influence priority’ on performance have been widely researched from various analytical perspectives. An overview of research trends to this effect has been reported by Du Plessis, Prinsloo, and Muller (2005). Numerous potentially influential success predictors are mentioned, such as cultural background as expressed via the population group, age, gender, English language proficiency, tutoring language of the institution, home language, admission policy, type of matriculation exemption, repeaters, comprehension and reading skills, to name but a few.

The importance of a sound decision on the type of applicable blended learning intervention is far reaching. The primary aim of intervention is to improve performance, but this comes with a price tag in terms of the financial survival of the ODL institution, the academic standing of the institution and input of the student, financially, mentally and physically. Hence the efficiency of the intervention can therefore not be left an unknown.

**Research Methodology**

**Research Objectives**

The initial research by the authors established that first-year students’ attendance of satellite classes in first-year Business Management and Management courses was significantly related to academic performance and markedly improved performance (Swanepoel et al 2009).

In the present study the research objectives aimed to:

- validate the significance of the identified relationship in the initial research via an alternative analysis methodology
- create an exploratory prediction model (expressed as a student success profile) for the success rate of students which takes cognisance of the interactive nature of predictor
variables, and, evaluates the contribution of satellite class attendance in conjunction with other possible biographic predictors in the model

- present the prediction model as a provisional profile for successful and unsuccessful first-year Business Management and Management students at Unisa

**Research Design**

The data that were analysed were retrieved from 2007 first-year Department of Business Management student records. Data fields extracted include information on examination marks (continuous data), satellite class attendance figures (categorical data) and biographical attributes (categorical data). For the purpose of the present research and analysis strategy, examination marks were categorised into ‘pass’ and ‘failure’ categories (categorical data) according to whether a pass rate of 50 percent was attained in the 2007 examinations. The nature of the collected data therefore required a quantitative research design (De Vos, Strydom, Fouche, and Delport 2005).

The non-parametric and categorical analysis technique applied as part of the analysis methodology, namely a decision tree data partitioning analysis approach (described in the analysis strategy section), aligned with the data type and data structure and also satisfied the underlying analysis assumptions set by the statistical analysis technique (Kass 1980).

In the planning stage of the research, it was decided to base the evaluation of the effectiveness of satellite class attendance on student records that indicated full participation in the relevant modules. Records indicating outstanding results, or re-admission to sub-examinations, or non-attendance, or withdrawals, or cancellations and other exemptions, were excluded from the database. This design decision could possibly inflate the actual pass-fail ratio if it was argued that all students not participating in the examinations actually ‘failed’, but the
reasoning was founded on inclusions of ‘true’ pass and failure cases in the analysis. In this way, a pure database was established without ambiguous cases.

**Sampling**

The examination results on 2007 first-year student performance in two Business Management and two Management modules were extracted from the official Unisa Student Database. Age, population group, home language, tuition language (Afrikaans or English), type of matriculation certificate and satellite class attendance furthermore constituted the biographical components.

To contextualise the inclusion of the type of matriculation certificate as a possible influential effect in the study, the following background information seems relevant: under the previous government (prior to 1994) various matriculation certificates were issued in South Africa up to 2007. The certificates were issued according to provincial, private, homeland and population group classifications. In addition, study admission is granted to older students (+23 category exemption), to foreign students and to Senate-approved cases. Unisa policy, as an ODL institution, grants open admission to all matriculation certificates holders. Against this background it was argued that the type of matriculation certificate held by students could, in conjunction with the effect of satellite class attendance, impact on student performance. Certificates were therefore classified according to the Unisa 2008 Student System Codes Guideline (Wilson, and Du Toit 2008):

- category 1: formerly traditionally white, private and Indian schools
- category 2: previously traditionally black or coloured schools
- category 3: special exemption, 23+, Senate-granted exemption, foreign, etc
Compared to South African residential universities with a very young student population, student-age distribution at Unisa has a larger proportion of older students, which implies that older types of matriculation certificates impact on the student population over a more extended period than at residential universities.

In total 5 740 records of student who had written exams were sampled out of a total of 12 321 registered students in 2007. The number of records analysed in the current research is slightly less than the 5 864 records included in the initial research by Swanepoel et al (2009). The biographical characteristics of the respondents were not included in the initial research. In the current study, incomplete records of biographical attributes had to be excluded, thereby reducing the sample size to 5 740 records.

**Satellite Classes as a Blended Learning Intervention**

Satellite classes were presented simultaneously at 25 auditoriums geographically spread across South Africa and Namibia. These venues were linked to one another and to the recording studios of the Department of Communication at Unisa via a network. At the studio, the lecturer presented subject content matter and students could communicate live with the lecturer via telephones at the venues. Presentations were also recorded on DVD and made available to students on request. Five satellite classes were presented over the duration of the semester. In total, 4 608 module attendance entries were recorded (some students attended more than one satellite class – up to five classes – and others more than one of the modules, as reflected in the attendance figures: MNG1M14 950; MNG1M25 480; BSM1M1P 1 653 and BSM1M2P 1 535 attendees).

Survey data were collected once the final examination marks had been recorded. This implied that no student was subjected to any ‘treatment’, which could have been to the advantage
or detriment of any student or subgroup of students. Data were collected from Unisa’s official databases, which ensured data integrity.

**Analysis Strategy and the CHAID Analysis Methodology**

As a first step in the analysis strategy, frequency distributions on all variables were calculated. This was followed by a decision tree data partitioning analysis methodology referred to as Chi-square Automatic Interaction Detection (CHAID) technique (AnswerTree 3.0 User’s Guide 2001).

The frequency tables were used to validate the dataset and describe the sampled population. Distributions are presented in Table 1. It was established that 55 percent of the sampled students passed their examinations, and that 31 percent attended (at least one) satellite classes. The majority of students, nearly 70 percent, were younger than 35. Eighty-one percent were African/black students and 78 percent spoke an African language at home. The results indicated that the tutoring language was predominantly English (95%). Fifty-five percent of the students were in possession of matriculation certificates of either traditionally white, Indian, private, African/black or coloured matriculation boards. A substantial number of students (45%) had other types of matriculation exemptions. The sampled population proved to be a good representation of Unisa students. Official Unisa statistics indicate that the majority of students are young (46.4% younger than 29 years and 50.6% older than 29 years), black/African students (64%) who speak an African language at home and are tutored in English (Subotzky 2009).

Frequency distributions assisted in identifying and condensing category levels of potential success predictors that proved to be sparsely populated. Sparsely populated predictor variables entered into the decision tree model (very low frequencies) could add bias to the eventual
prediction. The levels of categories of the age and type of matriculation certificate variables, were, for example, condensed into fewer more populous categories.

Table 1

Frequency Distribution of Performance, Satellite Class Attendance and Other Potential Biographical Predictor Variables (N=5740)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percentage</th>
<th>Missing Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellite attendance</td>
<td>attendee</td>
<td>1 758</td>
<td>30.63</td>
<td>1 758</td>
<td>30.63</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>non-attendee</td>
<td>3 992</td>
<td>59.37</td>
<td>5 740</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Exam results</td>
<td>pass</td>
<td>3 177</td>
<td>55.35</td>
<td>3 177</td>
<td>55.35</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>fail</td>
<td>2 563</td>
<td>44.65</td>
<td>5 740</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>&lt;25</td>
<td>1 666</td>
<td>29.02</td>
<td>1 666</td>
<td>29.02</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>25–34</td>
<td>2 319</td>
<td>40.40</td>
<td>3 985</td>
<td>69.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35–44</td>
<td>1 423</td>
<td>24.81</td>
<td>5 409</td>
<td>94.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>44+</td>
<td>311</td>
<td>5.77</td>
<td>5 740</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Population group</td>
<td>White</td>
<td>536</td>
<td>9.34</td>
<td>536</td>
<td>9.34</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Coloured</td>
<td>332</td>
<td>5.78</td>
<td>868</td>
<td>15.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>African</td>
<td>4 650</td>
<td>81.02</td>
<td>5 518</td>
<td>96.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>221</td>
<td>3.85</td>
<td>5 739</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Home language</td>
<td>European</td>
<td>1 270</td>
<td>22.15</td>
<td>1 270</td>
<td>22.15</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>African</td>
<td>4 463</td>
<td>77.85</td>
<td>5 733</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Tutoring language</td>
<td>Afrikaans</td>
<td>298</td>
<td>5.19</td>
<td>298</td>
<td>5.19</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>5 442</td>
<td>94.81</td>
<td>5 740</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Matriculation</td>
<td>Category 1</td>
<td>1 233</td>
<td>21.77</td>
<td>1 233</td>
<td>21.77</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Category 2</td>
<td>1 891</td>
<td>33.39</td>
<td>3 124</td>
<td>66.16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Category 3</td>
<td>2 540</td>
<td>44.84</td>
<td>5 664</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

In the second phase of the analysis (CHAID), the pass/fail rate of the students was regarded as the dependent variable and satellite class attendance, along with the available biographical variables, were entered into the decision tree model as independent variables to investigate the interactive contribution of the independent variables on the students’ pass/fail
The technique mimics real-life situations in that several effects generally jointly influence an event such as performance.

CHAID methodology was first developed by Kass (1980). CHAID is a relatively simple multi-variate classification and data partitioning technique (Eherler, and Lehmann 2001) and was introduced to study the interactive nature of the predictors of a dependent variable. The technique automatically selects those predictor variables that jointly, interactively and optimally predict the dependent variable. The technique works extremely well on large datasets with many predictor variables – which fit the data description of the current research.

The data partitioning process is based on the following principles:

- The prediction model that emerges is presented in the form of a classification tree referred to as a decision tree.
- The method is a stepwise process and starts off with the root as the set of all respondents partitioned according to the levels of the dependent variable. In the current analysis the ‘pass’ and ‘fail’ levels of the examination results variable represent the dependent variable levels. The step is illustrated in the Step 1 diagram depicted below (BM 1 = Business Management 1 and M1 = Management 1).
In the second step in the data partitioning process, the list of probable predictors is automatically evaluated to establish whether a ‘best’ predictor variable (referred to as a ‘splitting agent’) can be identified that will split the initial dataset into subsets. Partitioning is conducted in such a way that the most distinctive and significantly different subsets, with respect to the pass/fail categories of the dependent variable, emerge once partitioned. The partitioning of the data into subsets is referred to as ‘branching’ and the subsets as ‘branches’ or nodes. The Step 2 diagram below illustrates the principle as set out in the text.

In subsequent steps, the preceding step’s subsets are again investigated to determine which predictor variable then acts as optimal splitting agent (if such an agent exists) to once again
split the subset into the most distinctly different and significant subsets with respect to the pass/fail levels of the dependent variable.

- At each step in the process, chi-square tests are calculated to determine whether the splits are significant.
- The process continues until one of a number of stopping mechanisms is encountered.
- Before embarking on the partitioning process described above, CHAID evaluates the categories of each potential predictor variable (such as the categories of population group and matriculation certificate) and merges categories if judged to behave in a similar fashion with respect to the dependent variable. Dissimilar categories are maintained. The complete decision tree is depicted in Figure 1.

Why resort to segmentation or partitioning? Segmentation analysis proves to be useful in the current research in answering questions such as the following:

- which predictors most strongly define the segmentation of first-year diploma student success, and once established,
- which combination of the levels of the selected predictors defines student groups most likely to pass first-year Business Management and Management modules (identified as student subsets with a high pass/fail ratio) as opposed to
- which combination of levels of these predictors defines student groups at risk of failing first-year Business Management and Management courses (identified as student subsets with a low pass/fail ratio)?

The structure of the decision tree assists in this regard: by following branches of the tree from any given point back to the root of the tree, different combinations of characteristics that best define specific target groups can be derived.
The predictor selected for the first split of the trunk represents the most critical success predictor. The importance of predictor contribution to the model decreases with lower levels of the decision tree.

**Results and Interpretation of the CHAID Analysis**

Results of the CHAID analysis (Figure 1) indicated that population group proved to be the first critical and significant success predictor to split performance into distinct and significantly different subsets with respect to the pass/fail ratio attached to each population group. Segregation into three population subsets was significant, as indicated by a probability of less than 0.0001, associated with the chi-square statistic of 197.49. The pass/fail ratios for the African, white and coloured/other subsets were 1.05, 4.07, and 2.01 respectively, which indicates significantly different pass/fail ratios. The ratios imply that, for white respondents, four students passed for every one student who failed, while one African student passed for every student who failed in the African population group. The most critical, statistically significant contributor in explaining variation in pass/failure performance was thus population group. Based on pass/fail ratios, level one data segregation therefore indicated the white population group as probably the most successful student and the African student as probably the least successful student.

In the second step of the CHAID analysis, the type of matriculation certificate obtained acted as the next most critical splitting agent to split African and coloured population subsets into the most distinct and significantly different sub-subsets with respect to the pass/fail ratios of the performance variable. No splitting agent was identified for the white population subset. Probabilities of 0.001 and less than 0.001 were associated with the chi-square statistics of 48.40 and 18.12 respectively, for the African and coloured/other population groups. The analysis herewith identified type of matriculation certificate as the second most critical and statistically
significant success predictor (in conjunction with race group). For the matriculation categories of the African population groups, a pass/fail ratio of 1.11 was reported for category 2 and 3 matriculation certificates, and 0.71 for category 1 matriculation certificates. For the coloured/other population group, ratios of 1.54 and 3.72 were reported for categories 1 & 3 and for category 2 matriculation certificates respectively. Based on the pass/fail ratio, level two data segregation illustrated the interactive effect of predictors on performance, and (apart from the white population subset, with $r=4.07$) indicated coloured students with category 2 matriculation certificates as the most likely to attain success ($r=2.01$), while African students with a category 1 matriculation certificate are probably more at risk ($r=0.7$).

Satellite class attendance was identified in the third level as the most influential and statistically significant splitting agent. This made satellite class attendance a contributor in jointly explaining and predicting the performance of students. The pass/fail ratios for the attendance and non-attendance categories of the satellite class-splitting agent of the level three subsets are:

- 1.9 and 1.1 for the African population group in possession of a category 2 or 3 matriculation certificate
- 1.1 and 0.7 for the African population group in possession of a category 1 matriculation certificate
- 7.5 and 1.5 for the coloured population group in possession of a category 1 or 3 matriculation certificate.

The chi-square probabilities associated with the level three subsets were equal to 0.0001 (chi-square=29.93), 0.01 (chi-square=8.97), and 0.05 (chi-square=5.66) respectively, which indicate significance on the 0.1 percent, 1 percent and 5 percent levels of significance, respectively. Level
three data partitioning identified African students who wrote category 1 examinations and did not attend satellite classes as an at-risk student group ($r=0.65$). In addition, data partitioning suggests that African students who wrote the category 2 matriculation examination and did not attend satellite classes, to be at risk too. Age level should be ignored, as the significance attached to this small proportion is negligible. Conclusions regarding the latter subset are based on more observations and would represent a more conservative prediction. Level three data partitioning thus indicated that satellite class attendance contributed jointly and significantly to predicting student performance. This result confirmed the findings of the initial research.

The risk estimate, which estimates the accuracy of the model, was calculated as 0.41, with a standard error of 0.0065. The standard error is very small, which indicates that the risk of misclassification is stable, but the chances of misclassification are about 41 percent.
Profiling of the successful and at-risk student should thus follow the pass/fail ratio path relating to high and low ratios throughout the decision tree. The relative sample size of subsets
should also be considered when making deductions. Results can be summarised to describe the success profile of a first-year Business Management or Management student as follow:

- either a white student \((r=4.07)\), or
- a coloured student \((r=2.01)\) in possession of a category 2 matriculation certificate \((r=3.72)\).

The profile describes the at-risk diploma student as:

- an African student \((r=1.05)\) who is
- in possession of a category 2 matriculation certificate \((r=1.11)\)
- who did not attend satellite classes \((r=1.08)\) and
- is younger than 35 \((r=0.83)\).

**Summary and Conclusions**

The significance of the effect of satellite class attendance on performance, established in the initial research (Swanepoel *et al.*, 2009), was validated by this study. Satellite class attendance, as a significant third-level success predictor in the CHAID model, attests to this. The current study furthermore added new and relevant applied knowledge to the field of ODL and blended learning in that the interactive nature of success predictors (incorporating satellite classes) in first-year Business Management and Management modules, was identified and verified with the CHAID analysis strategy. The strategy allowed the effect of interaction between success predictors to be acknowledged and described in success and at-risk profiles for students.

Success profiles suggested that population group, the type of matriculation certificate and satellite class attendance impacted on students’ academic performance. In research, attributes such as ethnicity are a given and appreciated as such. However, if influential forces such as varying matriculation standards can be phased out (all SA students have been writing the same matriculation examinations since 2008) with a more uniform student corps entering into first-
year Business Management and Management modules, the impact of satellite classes as a blended learning intervention might be found to be even more beneficial. Nkomo, Weber and Amsterdam (2009) maintain that the exclusion from quality education for all has a paralytic effect on the individual and on society. A longitudinal evaluation study on the effectiveness of satellite classes will have to be conducted to monitor whether the gradual phasing in of a uniform entry level in the first year will indeed cancel out the identified current differences in entry-level effect. However, the non-uniform entry level of first-year students will probably take more time to peter out at Unisa, as an ODL institution, than at residential tertiary institutions. The average age of students at ODL institutions is typically higher and Unisa is no exception (with 50.6% of Unisa students in the ‘over 29’ age category, according to Subozky, 2009). Students with ‘old’ matriculation certificates will therefore be in the system over a longer period of time than at residential South African universities, which attract larger numbers of school-leaving matriculants who study full-time.

The risk estimate of the current CHAID analysis was reported as 0.41, which is still relatively high and indicates that other success predictors, currently unknown, could possibly explain an additional component of the variation present in the data. Further research should also consider new potential success predictors, such as psychographic factors, to the success profile.

The CHAID analysis methodology followed in this study proved to be truly applicable to the particular research context. The applicability of the research methodology and ease of interpretation suggest that the technique in itself could add value to the broader base of research strategies available and applied under similar profiling conditions.

An honest desire to fathom the success profile structure of first-year Business Management and Management students to enhance student learning in an ODL context, should remain the
driving force of the research, in the hope that measures might evolve to contribute to improved
student throughput and more effective blended learning interventions.

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SUCCESS PROFILING OF STUDENTS IN SMALL BUSINESS MANAGEMENT: A METHODOLOGICAL PERSPECTIVE ON THE INTERACTIVE NATURE OF SUCCESS PREDICTORS ON STUDENT PERFORMANCE AT AN OPEN AND DISTANCE LEARNING INSTITUTION

ABSTRACT

Aim of the study
The drive to improve the dismal academic performance of approximately 22 000 first-year students in the field of entrepreneurship and small business management at an open and distance learning (ODL) institution in a developing country, has resulted in the incorporation of a blended learning component, namely satellite classes, in the learning strategy to enhance the academic performance of these students in the subjects Business Management (covers business plans) and Management (covers management functions for small and medium-sized enterprises). Satellite classes mimic physical face-to-face student–lecturer tutoring and interaction by means of a series of networked, virtual real-time verbal communication and tutoring sessions. The task of monitoring the effectiveness of this intervention in relation to student performance to justify high implementation costs (Mathur & Olivier, 2007: 3) is essential. However, an in-depth analysis strategy should recognize the fact that no single intervention or attribute influences an outcome (such as performance) in isolation; a combination of interacting forces usually affects an outcome (Sadler and Erasmus, 2005:32). Whereas an initial study confirmed a statistically significant relationship between satellite class attendance and academic performance (Swanepoel, de Beer & Müller, 2009), this study evaluated the interaction effect of satellite classes and additional potential success predictors, namely population group, type of matriculation and age on academic performance from a methodological perspective. External indicators and biographical characteristics (and combinations of these factors) that enhance academic performance translate into profiles of successful and at-risk students (Wojciechowski & Palmer, 2005:1).

The research objectives is to create an exploratory prediction model for the success rate of students where the model takes cognisance of the interactive nature of predictor variables and evaluates the contribution of satellite class attendance in conjunction with other possible biographic predictors in the model and present the model as a provisional profile for successful and unsuccessful first-year Business Management and Management students at the University of South Africa.
Methodology and approach

Information on 2007 first-year student performance (in the Business Management I modules [BSM1M1P and BSM1M2P] and in the Management I modules [MNG1M14 and MNG1M25]) regarding satellite class attendance and potentially influential biographical indicators were collected from two separate databases. The non-parametric and categorical analysis technique that was applied as part of the analysis methodology, namely a decision tree data partitioning analysis approach, aligned with the data type and structure and also satisfied the underlying analysis assumptions set by the statistical analysis technique.

As a first step in the analysis strategy, frequency distributions on all variables were calculated. This was followed by a decision tree data partitioning analysis methodology which is referred to as the Chi-square Automatic Interaction Detection (CHAID) technique. This decision tree methodology described the interactive driving forces that impacted on student success. Satellite class intervention and biographical student attributes constituted the driving forces.

Results and conclusions

The CHAID analysis enabled the profiling of successful and at-risk students. The interactive nature underpinned by the analysis technique made the methodology perspective applicable to the situation which exists in many departments at ODL institutions. The decision tree algorithm mimics true life situations where various effects interactively and jointly influence and predict an outcome.

The results of the CHAID analysis (figure 1) indicated that the segregation of the data entered population group (Blacks, Whites and Coloureds) as the most critical and significant success predictor to split performance into the most distinct and significantly different subsets with respect
to the pass/fail ratio of each population group category. In the second step of the CHAID analysis, the type of matriculation certificate obtained acted as the next most critical splitting agent to split the African and Coloured population subsets into the most distinct and significantly different sub-subsets with respect to the pass/fail ratios of the performance variable. Satellite class attendance was identified in the third level as the most influential and statistically significant splitting agent. This made satellite class attendance a contributor in jointly explaining and predicting the performance of students. The risk estimate, which estimates the accuracy of the model, was calculated as 0.41 with a standard error of 0.0065. The standard error is very small, which indicates that the risk of misclassification is stable but the chances of misclassification is about 41%.

Implications

Student failure is costly to both the institution (in terms of the eventual throughput rate and associated subsidy quotas from central government) and to the students (in terms of time and accumulated study expenses). The findings are relevant to education policy makers with regard to the type of school leaving certificate programmes at secondary education level that would result in greater performance at tertiary education level. For educators it is evident that to enhance distance learning education, satellite classes could be added; in addition they would be able to develop appropriate bridging courses for high-risk profile students. From a university counselling perspective, it is possible to identify the type of students with the highest risk profile and the type of counselling they would need.
The risk estimate of the current CHAID analysis was reported as 0.41, which is still relatively high and indicates that other success predictors (currently unknown) could possibly explain an additional component of the variation in the data. Further research is required to identify new potential success predictors, such as psychographic factors which should also be considered in the success profile.

Figure 1

CHAID decision tree for first-year Business Management and Management student success/failure rate.
The diagram represents the CHAID decision tree for the pass/fail ratio of first year Business Management students. The filled red bar in each node represents pass rate and the second green bar represents failure rate. Associated frequencies are indexed directly above each bar. 'Y' indicates pass/fail ratio.

Population group
adj P-value = 0.0000; Chi-sq=137.43; df=2

Level 0
Pass/Fail

Level 1
PopGroup

African

White

Coloured, others

Type of matric certificate
adj P-value=0.003; Chi-sq=48.40; df = 2

Level 2
Matr Crtf

Category 283

Category 1

Satellite class attendance
adj P-value=0.0000; Chi-sq=29.53; df=1

Attend

Not Attend

Category 183

Category 2

Satellite class attendance
adj P-value=0.0032; Chi-sq=8.70; df=1

Attend

Not Attend

Level 3
Attendance

Age category
adj P-value=0.0024; Chi-sq=11.28; df=2

Younger

Older

Level 4
Age Ctg
Abstract

The aim of this research is to analyse the emergence of the concepts of sustainable development and social responsibility in companies in time and space. A spatio-temporal reading will indicate the most important socio-political and environmental events that have emerged with these two concepts. In order to complete the odyssey, a spatio-temporal analysis has retraced the epistemological evolution of these latter, whilst at the same time
remarking the appropriation that has been made by the different institutional and organisational actors.

The historical and epistemological reviews tell us that these two concepts, which came into existence almost 80 years, have indefinite outlines; one can be substituted for the other. However, thanks to this odyssey, we have reduced the boundaries even further between sustainable development and social responsibility and shown their theoretic and historical association. The perspective adopted shows that the concept of corporate social responsibility is closely connected to that of sustainable development. This connection means that researchers in management science are faced with more new problem issues reaching further than the simple lack of conceptual consensuses.

**Key words:** spatio-temporal analysis; American and European approaches; sustainable development; eco-development; corporate social responsibility.
A spatio-temporal odyssey around the concepts of sustainable development and corporate social responsibility: boundaries to be determined?

Abstract
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Key words: spatio-temporal analysis; American and European approaches; sustainable development; eco-development; corporate social responsibility.

Introduction
The policies in industrialized and developing countries show an increasing awareness of the ecological, economic and social risks run by man and ecosystems. Companies are increasingly committed to the process of sustainable development. The fact that this latter, as well as corporate social responsibility, is being taught, denotes the increasing interest on the part of the academic community in these emerging pedagogical fields.

The aim of this article is to provide an odyssey in time and space of the concepts of sustainable development and corporate social responsibility. This spatio-temporal analysis highlights the major social, political and environmental events that have marked the emergence of these two concepts. This odyssey also retraces the epistemological evolution of these two concepts by indicating the appropriation which has been made of them by
governments, diverse institutions and companies. The historical and epistemological perspectives have caused links to be built up between sustainable development and corporate social responsibility. These two concepts that have existed for nearly a century have instable boundaries, as one can be substituted for the other in particular contexts.

This research has been structured in three parts. The first considers the socio-political and academic emergence of sustainable development through institutional commitment (1.1) and the conceptual metamorphosis (1.2). In the second part, we have discussed the change in the paradigm of company responsibility by inviting the reader to look at the origins of this concept (2.1) whilst highlighting the differences and the similarities between the American and European approaches (2.2). This historic and epistemological path led us to summarise the emergence and the transformation of these two concepts in connection with the principal socio-political and environmental events which have marked them. (3). This summary is one of the main contributions to this research. As a conclusion and going beyond the debates concerning the preservation of resources and the equity within and between generations, company performance is achieved by resolving the profitability/responsibility equation. We have given information on the theoretical contexts that are likely to explain why companies are committed to sustainable development. The stakeholder theory appears to be the most appropriate.

1. The socio-political and academic emergence of sustainable development

In the middle of the 1960s, a new awareness of the ecological challenges brought numerous social, economic and environmental questions to the forefront. Different organizations and governments took action to clarify and enrich the debates on sustainable development.
1.1. Institutional commitment

The negative effects of the industrial revolution on the environment and on man have been accumulating since the last century. This observation meant that the development question had to be reconsidered by examining the models that guarantee long-term economic, social and environmental progress. This is what is called sustainable development which we will denote in the following text by the abbreviation SD.

In 1962\(^1\), the book *Silent Spring*, published by Carson, had an important impact on American civil society. The author indicated that the residue of agricultural pesticide was reaching catastrophic levels; considerable damage was being caused to animal species and man. Strategy for a sustainable world,

Apart from these ecological threats, demographic concerns were also emerging. The President of the French Academy of Sciences, Heim (1963), was questioned on the impact of demographic growth on SD (term not yet used at the time). In the same way, Ehrlich (1968), in his work *Population Bomb* predicted a rarefying of resources and mass deaths due to pollution. The doubling of the world population in twenty five years, he confirmed, would mean that that the increased needs that would be difficult to fulfil for developed countries and impossible to satisfy for those that were poor (communication structure, raw materials, agricultural products, health care needs etc). The overpopulation would exhaust the supply of mineral resources and water and lead to famine, epidemics, destruction of the fauna in the oceans and air pollution etc.

The 70s was a period of international protest movements in favour of environmental protection. The United States organised *The Earth Day* on 22\(^{nd}\) April 1970, a project initiated by Senator Gaylord Nelson; the ecological and environmental issues brought together a crowd

\(^1\) In the 19th century, the works of John Muir strongly influenced the emergence of the modern environmental movement. His activism contributed to saving the Yosemite in the USA.
of almost 20 million people. This demonstration shaped the emergence of a modern ecological movement in the West.

Conscious of the ecological and demographical risks that threaten the environmental, socio-political and economic balance, various programmes and measures were implemented by international organisations, governments and companies\(^2\). Table 1 shows the most significant.

<table>
<thead>
<tr>
<th>Year</th>
<th>Socio-political Events</th>
<th>Programmes and observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>Earth Day</td>
<td>The planet’s resources are not unlimited; consequently it is essential to organise for them to be shared equitably and sustainably.</td>
</tr>
<tr>
<td>1971</td>
<td>Creation de Greenpeace</td>
<td>This organisation concentrates its actions on global problems which threaten the environment. Climatic changes, the consumption of energy, biodiversity... are planetary challenges</td>
</tr>
<tr>
<td>1971</td>
<td>&quot;Meadow&quot; report by the Club de Rome: halt growth</td>
<td>This report warned of the danger of exponential economic and demographic growth which would drain resources and overexploit natural systems</td>
</tr>
<tr>
<td>1971</td>
<td>&quot;Only one earth&quot;, report published by René Dubos and Barbara Ward</td>
<td>This document was inspired the Stockholm summit. René Dubos was the creator of the idea &quot;think globally, act locally&quot;.</td>
</tr>
<tr>
<td>1972</td>
<td>Founex Report written by Maurice Strong, organiser of the United Nations conference in Stockholm on the environment and development</td>
<td>Development and the environment are &quot;two sides of the same thing&quot; It is necessary to conceive and implement development strategies that are socio-economically equitable, that respect the environment, called eco-development strategies</td>
</tr>
<tr>
<td>1972</td>
<td>United Nations summit on man and the environment in Stockholm.</td>
<td>Appearance of the eco-development concept which called into question the normal means of development</td>
</tr>
<tr>
<td>1987</td>
<td>Brundtland Report, in preparation for the Rio summit: The future for all of us</td>
<td>SD is &quot;a development which fulfils the needs of current generations without compromising the capacity of future generations to fulfill theirs&quot;</td>
</tr>
<tr>
<td>1990</td>
<td>The first report of the PNUD on human development</td>
<td>This report used IDHs for the first time, indictors of human development</td>
</tr>
<tr>
<td>1992</td>
<td>(Rio) Earth Summit</td>
<td>Rio Declaration with 27 principles; Agenda 21 with 2,500 recommendations; conventions on biodiversity, the climate, desertification; text on the forests.</td>
</tr>
<tr>
<td>1997</td>
<td>United Nations General Assembly in New York (Rio+5)</td>
<td>Launching of the &quot;Global Reporting Initiative (GRI)&quot; whose objective was to create a normalized report in the same way as a financial</td>
</tr>
</tbody>
</table>

\(^2\) See. Shell case study after the Brent Spar and the Niger delta scandals in the 1990s.
Table 1 – Institutional commitment in favour of SD

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Kyoto Conference</td>
<td>The Kyoto agreement was created with a will to be effective but the ratifications did not follow</td>
</tr>
<tr>
<td>2002</td>
<td>World Summit on SD (Johannesburg)</td>
<td>&quot;Our house is burning and we are not even looking&quot; (J. Chirac). Active participation of companies</td>
</tr>
<tr>
<td>2009</td>
<td>Copenhagen Summit</td>
<td>Failure to reach an international agreement to combat global warming</td>
</tr>
</tbody>
</table>

The chronological analysis of this summary indicates that the concept of SD has progressively moved further away from its initial strictly ecological acceptance. In many forms and dimensions, it can be defined in numerous ways.

1.2. The emergence of the concept: the triple elements “development-eco-development-sustainable development”.

Following the socio-political events which marked the 1970s, the two antagonistic approaches, that of human development and the environment, needed to be reconciled. This reconciliatory metamorphosis was recorded over two important periods, the first being situated in the 1970s. A team of researchers mainly made up of economists, led by Maurice Strong met together in 1972, in order to examine the connections between the environment and development. This team concluded that it was necessary and possible to implement equitable socio-economic development strategies that respected the environment, called eco-development strategies.

In France and from 1973 onwards, the Sachs team continued the American research on the concept of eco-development. In order for environmental constraints to become part of entrepreneurial strategies, five factors have to be taken into consideration, that is to say: the combination of social relevance and the equity of the solutions proposed, ecological prudence, economic effectiveness, cultural aspects and territoriality. This transition of the concept of
development in its traditional approach, to that of eco-development, called into question the development models used up to then by the economists.

The second important step was the continuation of this evolution at the end of the 1970s and during the 1980s. In fact, the expansion of the conception of eco-development led to problem issues which were much more than just ecological preoccupations. In fact, in November 1976, the "Primer simposio sobre ecodesarrollo", organised by the ‘Mexican Association of Epistemology’, affirmed that the more and more pronounced conflicts between the economic models in place and the natural degradations could be resolved by a choice of society which was a matter for the institutional and political powers. The development should not only be guided by economic considerations, but also by social and ecological requirements.

Therefore the concept of eco-development, reappropriated by the Anglo-Saxons, disappeared and was referred to as ‘Sustainable development’, initially translated as tenable, then sustainable development. This expression was cited for the first time in 1980 by the International Union for Nature Conservancy in its work ‘World Strategies for Conservation’ It was then introduced in 1987 in the report ordered by the United Nations for the Brundtland Commission and was accepted by the Rio conference on the environment and development in 1992.

Recently, in 2001, the European Communities Commission noted that “sustainable development is more than a purely environmental concept; it is a question of making a dynamic economy exist in a society that would give everyone their chance, at the same time improving the productivity of resources by disassociating growth and the degradation of the environment”. 
These different approaches refer to a macro-economy; however it is at a micro-economic level that SD is subject to contingencies; (Reynaud 2004). These approaches did not generally provide the means of integrating this concept into company management. It was only at the end of the last century that this concept spread to the micro-economic level.

2. Responsibility going beyond the traditional paradigm: from leaders to companies

In the 1970s, the considerable increase in industrial accidents, pollution and environmental or health scandals… provoked the indignation of public opinion. Social actions questioned companies on the level of ecological responsibility in their activities, their commitment in political life, and the equality of the sexes at work or even racial discrimination (Smith 2003). The fundamental question was how to apply a systematic managerial approach to dynamic and new objectives, that is to say, the social questions which companies found themselves confronted with. Faced with pressure from the different stakeholders, the management teams have become more and more committed to the SD process (Grégoire, and Mercier 2003).

The Rocky Mountain Institute (RMI) in the United States has the aim of encouraging companies to make an efficient use of natural resources that is compatible with SD and the global security of human beings. The World Business Council for Sustainable Development (WBCSD) had been militating so that company management developed a sense of responsibility with regard to respecting natural resources. In one of the programmes dating from 1992, the UNO incited industrials to work on a declaration of commitment to SD. In Europe, and since 1987, industrial companies have increasingly integrated the problem issues connected with SD In 2002, the European Commission set up a multilateral forum to enable companies to exchange views on responsible social practices.
Including SD in company preoccupations shows a significant move from a paradigm centred on management responsibility to another focused on companies and their managers. According to Stuart (1997) a company is a unique organisation which has the financial, technological and motivational resources necessary to reach sustainability. It can act internally on each of its resources to propose ‘sustainable’ goods and services. The challenge is to overcome pollution, climatic changes, the drain on resources, poverty and inequalities.

This paradigmatic transition has led to numerous debates on corporate social responsibility that we have denoted with the abbreviation CSR. The academic and managerial community is becoming more and more implicated. (Capron, and Quairel-Lanoizelée 2004; Déjean, and Gond 2004; Igalens 2004; Allouche 2005). However the definition of CSR has not by any means led to a consensus. In this part, we have returned to the origins of this concept (2.1) and then analyzed the American and European approaches.

2.1. The origins of the concept

A voyage to the historic origins of CSR ineluctably implies a detour to consider religious facts. These have played an important role in the theoretic construction process of social responsibility. The Protestant religion occupied a preponderant place in the formation and the spread of the notion of CSR in the USA. (Bowen 1953). According to Acquier, Gond, and Igalens (2006), the Protestant and Catholic religions were the more or less explicit sources of inspiration for the first conceptualisations of the notion of CSR.

During the first half of the 20th century, the Protestant concepts of "public service" and "stewardship" characterized the relationship between companies and society. Property was not an absolute and unconditional right. Private property management had to contribute to collective well-being. Each property owner had to satisfy the needs of society and answer for his acts before God and society. The Catholic Church condemns the exploitation of the human
race and more recently that of the environment. "The doctrine of the church has also inspired numerous practices, by creating a model of paternalist management that can be considered retrospectively as socially responsible" (Acquier, Gond, and Igalens 2006).

For Frederik (1994), the origin of the concept was to be found in the work of Berle and Means (1932). They questioned the consequences of power transfer following the separation of capital holdings and the exercise of managerial power. Carroll (1979) attributed the paternity of the CSR concept to Bowen in his work Social Responsibilities of the businessman. Along the lines of the works of Bowen (1953), the CSR concept has progressively emerged as a managerial problem issue. Thus appeared the trend of companies’ social performance "CSR: Corporate Social Responsiveness". The works of Ackermann (1975) and Ackermann, and Bauer (1976) were precursors of this trend; they apprehended companies as organisations that were not closed in. This conception based on a processual vision, studied the capacity of a company to respond to social pressures. They were no longer interested in the contents of the CSR, but a process more orientated towards the means than the ends.

There was a certain lull in the intellectual and social debate on CSR in the 1980s and the beginning of the 1990s. It was in the middle of this period that they resurfaced (Acquier, and Gond 2005). The consequences of numerous scandals and economic crises awakened the interest of the media, governments and various social actors. The observation was that economic performance does not necessarily lead to the well-being of society or social progress: a few illustrations of this were the destruction of the environment, job insecurity or even discrimination towards certain social groups.
Important works re-orientated and reunified approaches which seemed in the past, to be far from one another. Those relating to companies’ societal performance contributed summaries of approaches which had, up until then, been disparate in this field of research. The investigations were structured around precise managerial problem issues such as the operationalization of CSR and the relationship between performance and this latter (Drucker 1984; Gond 2003).

The view according to which CSR participates in a company’s financial performance shows that it has a preponderant role. The only performance objective being to maximize the share value was called into question; the shareholders were no longer considered as the only beneficiaries of the profit, actors carrying out true entrepreneurial functions were also associated with it. This view highlighted the interest in a ‘partner’ approach which took the interests of all the company stakeholders into account (Berles, and Means 1932). The assessment of company performance was apprehended from three angles ‘Triple Bottom Line’: social, the social consequences of the company activity were analysed for all the stakeholders (People); environmental, to ensure there was a compatibility between the company activity and maintaining the ecosystems (planet) and economic; a company has to ensure that it is viable.

Because of its managerial dimension and its conceptual scope, the use of the stakeholder theory in the field of CSR constituted the second marked advance in the 1990s period. According to Déjean, and Gond (2004) "companies therefore seemed to rediscover the necessity of better managing their societal responsibility which could be defined, when first analysed, as more explicitly taking the stakeholders into account in the strategy".

Despite the efforts to summarise this in the 1980s and 1990s, there was still no normative definition that was capable of really defining the CSR concept. A geographic approach
highlighted the fundamental differences between the American and European conceptions. Whereas the first is built on ethical and religious values, the second took its sources from political debates.

### 2.2. American and European approaches: philanthropism versus mercantilism

Like SD, CSR is a large and not very stabilized concept. The numerous theses have been disparate, unclear and even contradictory (Wood 1991; Allouche, Huault, and Schmidt 2004). We made the choice to make comparisons that were likely to show common or differentiating dimensions. Globally two currents of thought emerged from this; the American and the European. Capron and Quairel (2004) concluded that the first consider CSR as a group of philanthropic actions. Bowen (1953), Carroll (1979), Wartick and Cochran (1985), Wood (1991) and Clarkson (1995) are authors who are representative of the American school. In the following summary table, we have highlighted the principal American approaches to CSR with the corresponding definitions.

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Authors</th>
<th>Definition : CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence of the protestant religion in the theoretic</td>
<td>Bowen (1953)</td>
<td>Was developed according to the perspective of the social control of private property; its referred to the protestant concepts of “Stewardship” and “trusteeship”.</td>
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<tr>
<td>construction of CSR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction of moral dimensions in the decisions</td>
<td>Bowen (1953)</td>
<td>The company directors have to implement strategies, make decisions and guarantee practices so they are compatible with the objectives and the values of the community in general.</td>
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<tr>
<td>taken by the company directors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going beyond economic and technical responsibilities</td>
<td>Davis (1960)</td>
<td>is all the decisions taken for reasons which go beyond a company’s economic or technical interests</td>
</tr>
<tr>
<td>Going beyond economic, contractual or legal</td>
<td>McGuire (1963)</td>
<td>Supposes that a company not only has legal and economic obligations but that it also has responsibilities towards society which exceed these obligations.</td>
</tr>
<tr>
<td>responsibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximizing the profit for shareholders</td>
<td>Friedman (1962)</td>
<td>is the fact of generating the maximum profit for shareholders</td>
</tr>
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<td></td>
<td>Friedman (1970)</td>
<td>Consists of using its resources and undertaking activities destined to increase profits</td>
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</tbody>
</table>
Meeting the expectations of society in a voluntary way  
**Caroll (1979)**  
Encompasses all the economic, legal and ethical, expectations, as well as the discretionary ones that society expects of its organisations.

Micro-economic approach for the relation between a company and its environment.  
**Wartick and Cochran (1985)**  
Is the subjacent interaction between the principles of social responsibility, the process of social awareness and the policies implemented to deal with social problems.

Respecting the principles to be found on an institutional, organisational et managerial level  
**Wood (1991)**  
Is the interaction of the three principles: legitimacy, public responsibility and managerial discretion. This results in three levels of analysis: institutional, organisational and individual.

Introduction of societal performance as a capacity to satisfy the stakeholders.  
**Clarkson (1995)**  
Is the capacity to manage and satisfy the different stakeholders in the company.

<table>
<thead>
<tr>
<th>Table 2 – Principal American approaches to CSR and the definitions connected with them</th>
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</thead>
</table>
| **Meeting the expectations of society in a voluntary way**  
**Caroll (1979)**  
Encompasses all the economic, legal and ethical, expectations, as well as the discretionary ones that society expects of its organisations. |
| **Micro-economic approach for the relation between a company and its environment.**  
**Wartick and Cochran (1985)**  
Is the subjacent interaction between the principles of social responsibility, the process of social awareness and the policies implemented to deal with social problems. |
| **Respecting the principles to be found on an institutional, organisational et managerial level**  
**Wood (1991)**  
Is the interaction of the three principles: legitimacy, public responsibility and managerial discretion. This results in three levels of analysis: institutional, organisational and individual. |
| **Introduction of societal performance as a capacity to satisfy the stakeholders.**  
**Clarkson (1995)**  
Is the capacity to manage and satisfy the different stakeholders in the company. |

Contrary to the American positions, the European models recommend that, apart from making profits which is the first responsibility of companies, they can together contribute to achieving social and environmental objectives; this objectives need to be included in the strategic investments (Igalens, and Vicens 2004).

Associating CSR with voluntary participation and with the internal and external stakeholders is one of the discordant points which have been identified by the school that criticizes CSR. According to Gendron (2000), this association gives a great deal of latitude to companies which are unaware of the role of public authority; but it is the State which formalizes arbitration between social actors and see that there is social equity.

In a comparative study carried out in Europe and the United States, Maignan and Ralston (2002) highlight the different significant geographic approaches. Contrary to the United States, French and Dutch companies do not really put forward an image of citizenship in their communication operations. This comes back to the conceptions of the role and the place that
the company has in society in general. In Western Europe, CSR is often reduced to working conditions (The State being responsible for social ‘well-being), whereas in the United States, companies have a moral responsibility towards the community in which they operate (Allouche, Huault, and Schmidt 2004).

As this concerns the implication of American entrepreneurs in CSR, these authors conclude that this implication is strong, long-standing and is clearly founded on the values of shareholders; this is consequently infused in their organisational culture. In France and in Holland, the implication is based on performance criteria.

Therefore the way in which CSR is in the two continents indicates that in the United States it is essentially based on philanthropic programs and voluntary participation; through questions of quality of life, integration and education, the community is the centre of interest. On the other hand, in France and in Holland, actions favouring CSR are certainly orientated towards programs of voluntary participation, but they are also closely linked to productive activities and marketing; these programs concern the stakeholders engaged in productive cycles (quality of products and services in France, health and security of employees in the Netherlands).

According to Gond (2005), in Europe, unlike the USA, CSR is largely assimilated with SD. This semantic and conceptual conciliation attempts to remove a recurrent difficulty which consists in finding a consensual foundation that is likely to provide companies with stable situations for exercising CSR. It is however still the case that despite the fundamental differences in American and European paradigms, the connection presented previously still dominates, that of the *Triple Bottom Line*. This concerns the transposition of the concept of SD to companies.
Human beings, finding themselves at the centre of problem issues concerned with management, ecological preoccupations and globalization are calling for managerial processes to be renewed. The challenges of sustainability require social responsibility that goes beyond legal obligations; this indicates more investment in human capital, respect for the environment and relations with the "stakeholders" (CCE 2001). Whatever the CSR approach, the debate is no longer concerned with its relevance and its importance; it concerns the operating strategies and the role of companies to succeed with it.

In the light of the spatio-temporal analyses of SD and CSR, we have proposed a framework for analysing their emergence; this combines the missing dates, the corresponding socio-political events and the institutional and organisational commitments which resulted from them. This framework is one of the major contributions of this research.

3. A synthetic putting into perspective delimiting the links between the two concepts

The diverse economic crises, the decade of development in the 1960s, the reports of the Brundtland commission, the Rio and Johannesburg summits were some of the major events that marked the emergence of the SD and CSR concepts (table 3). The implication of diverse organizations and governments and more and more in depth works from the scientific communities have marked our conceptual odyssey. From development to sustainable development, it is today necessary to improve human conditions without destroying the ecosystems. From the moral dimension in entrepreneurial decisions to societal performance; CSR is the perfect application for SD in companies.

*The World Business Council for Sustainable Development (WBCSD)* includes CSR in a SD context. This is *the continuous commitment of companies to act correctly from an ethical viewpoint and contribute to economic development, at the same time improving the quality of*
life of its employees and their families, the local community and all of society" (Lavorata, and Pontier 2005). The European Commission on SD agreed with this observation in a paper of July 2002. “In fact CSR is intrinsically connected with the concept of sustainable development”; it is considered as an essential element in SD strategy; for this, the authorities must encourage and ensure that companies include environmental and social preoccupations into their ways of management.

For Dreveton and Krupika (2005), CRS is the means of transferring sustainable development to companies Igalens (2004) totally agrees with this sense. The concept of CSR seems to be simply the application of SD in companies. This implicates the responsibility of a large number of actors; According to Capron and Quairel-Lanoizélée (2004), CSR is an appropriation on the part of the companies of SD logics. Therefore this appropriation, as an expression of SD applied to organisations, is a process of development which implicates combined changes so that this new means of management is totally effective.
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</tr>
</thead>
<tbody>
<tr>
<td>Socio-political and environmental events</td>
<td>Ecological crisis</td>
<td>International awareness</td>
<td>Ecologic al crisis</td>
<td>Simultaneously taking into account the environmental, economic and social problems connected with SD</td>
<td>Drawing up of of 27 ecological principles</td>
<td>Obligation to publish reports on SD</td>
<td>Incitation for there to be an obligation for companies to actively participate</td>
<td>Combat against global warming</td>
<td>Application of SD at a company level</td>
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<tr>
<td>Dust Bowl</td>
<td>Tragedy of Minamata</td>
<td>Creation of OCDE and WWF</td>
<td>Creati on of PNUD</td>
<td>Meadow Report: halting growth</td>
<td>First fuel crisis</td>
<td>Brundtland Commission</td>
<td>Earth Summit (Rio)</td>
<td>Rio + 5</td>
<td>World Summit on SD (Johannesburg)</td>
<td>Summit of Copenhagen</td>
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**Emergence of the concepts**

<table>
<thead>
<tr>
<th>Eco-development</th>
<th>Sustainable Development</th>
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<td>Operate Social Responsibility</td>
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**Epistemological genesis**

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<th>CSR</th>
<th>Influence of the protestant religion in the theoretic construction of CSR</th>
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<td></td>
<td>Introduction of moral dimensions in the decisions of company directors</td>
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<td>Going beyond economic and technical responsibilities</td>
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<td>Creating maximum profit for the shareholders</td>
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<td>Introduction of social performance</td>
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| SD | Awareness of the necessity to integrate cultural, social, economic institutional, political and ecological dimensions |
|    | Development to the detriment of the quality of the environment cannot be viable in the long-term |
|    | Improve human conditions without destroying the eco-systems |

**Organisational and scientific implications**

| Academic Community and diverse international institutions |
| Governments |
| Companies |

**Table 3 – Putting into perspective the spatio-temporal emergence of SD and CSR according to the most important social, economic and environmental events**
Conclusion

SD and CSR are themes which have mobilised many political, economic, social and academic communities. The difficulty of finding a universal definition and delimiting the scope of each of the two concepts often causes the definition of these connections to be unclear and ambiguous. However, thanks to our odyssey, we have been able to further reduce the boundaries between them and show their theoretic and historic association.

CSR is intrinsically connected with the concept of SD. This interaction is one of the keys factors in the capacity of companies to adapt to the challenges of SD. The central hypothesis is that the respect of certain moral and ethical values is indispensible for companies’ sustainable economic development.

The general idea is that this latter integrates social and environmental objectives into its managerial choices. This means that the expectations of all the stakeholders are taken into consideration in the strategic decisions. This necessitates adopting new management models and making a change in the systems of values of organisations. To achieve performance, the two factors, profitability/social responsibility, must be interconnected.

It remains that in order to explain companies’ strategic choices to favour sustainable energy, it is necessary to adopt integrating approaches based on the entrepreneurial theory (Spence, Ben Boubaker-Gherib, and Biwolé 2007); the stakeholder theory (Dontenwille 2005) or the resources approach (Borchani 2004). The stakeholder theory seems to be the most relevant; the influence of diverse actors (internal or external) when adopting responsible and sustainable behaviour, would better explain these strategic choices. Included in an enlarged system thanks to the systematic approach of SD, companies are social organisations whose interactions with neighbouring social groups are intensifying.
Bibliography


Does the history matter?
The role of past links in the emergence of SMEs networks

Abstract
This paper aims at exploring if and under which conditions the need for knowledge exchange within a small firms’ cluster is able to generate a more or less stable structure of links among them. We focus on a specific kind of small firms’ clusters called Industrial Districts (IDs); in particular, we analyze IDs with flexible specialization, in which knowledge exchange is driven by the search for the complementary knowledge assets. Previous works of the authors proposed an agent-based model of IDs to explore which are the properties of networks emerging from firms interaction prompted by the search and exchange of complementary specialized knowledge. This model brought to the conclusion that limited relational capability due to the small size and an exchange mechanism solely based on the barter of complementary knowledge are structural conditions that limit individual firms growth in IDs with flexible specialization. This paper presents a new version of the model to analyze the role of embeddedness of relationships among IDs firms in shaping emergent network structures. The aim of the paper is to answer to the following research questions:
Can knowledge complementariness explain the emergence of a stable network of firms within a SMEs cluster? Which are the structural properties of these networks? Which role the embeddedness of relationships among firms play in shaping the structure of emergent networks?

Key Words: small firms clusters, networks, agent-based simulation, embeddedness

Background
The notion of Industrial District (ID) was introduced by Alfred Marshall in 1919; he identified in the availability of network externalities a crucial factor for the competitiveness of local systems of specialized small and medium enterprises (SMEs). Traditional approaches to the theory of the firm like transaction costs theory (Coase, 1937) have been used to explain IDs functioning and performances (Dei Ottati, 1994), but such economic explanations have been considered unable to provide a full account of the complex nature of the embedded nature of inter-organizational links and processes characterizing small firms clusters (Uzzi, 1996).
By adopting a theoretical perspective influenced by social network theory and complexity science, another stream of literature mostly developed in the ‘80s and ‘90s attributed IDs’ effectiveness to the richness of IDs’ underlying relational systems (Aydalot, 1986; Becattini, 2000; Brusco, 1982; Camagni, 1989; Rullani, 1992).
According to the network approach, ID’s structure is based on a dense and strong network of relationships among autonomous and heterogeneous agents (firms, families, local institutions). The network perspective (Granovetter, 1985; Powell, 1990), though acknowledging the relevance of transaction economics, emphasizes the social and cultural determinants of inter-firms relationships, like the role of informal transactions (Uzzi, 1997), the sharing of norms and culture, reciprocity and trust (Jones et al., 1997). A key characteristic of social networks is that they allow efficient access to knowledge resources for members in the network (Podolny, Page, 1998) as well as the creation of idiosyncratic and valuable knowledge resources thanks to sharing and integration of individual knowledge. In particular, knowledge flows inside district boundaries are recognized as one of major drivers of dynamism of IDs (Basant, 2002). Furthermore, thanks to geographic proximity and the availability of social capital, IDs are privileged loci for tacit knowledge diffusion (Inkpen, Tsang, 2005).

While the network approach has greatly contributed to the understanding of the complexity of knowledge exchange in IDs and its influence on IDs performances, research on small firms networks has mostly assumed the network as a given.

Cowan and Jonard (2004) developed a model to analyze how network topology influences knowledge sharing performances. In this paper we start from Cowan and Jonard’s model but follow the opposite perspective taking also into account the role played by the embeddedness of relationships among firms in the emergence of specific network structures.

Methodology and Main Results

To answer to the above questions we adopted the agent-based simulation (ABS) approach. We present an agent-based model of a vertical ID. In this kind of IDs firms are specialized in one or two small phases of the production process (Piore and Sabel, 1984) and need to establish vertical links in order to build productive chains able to assemble and deliver final products to
the market. In our model, firms population is made up by subgroups of firms with complementary competencies; during each simulation cycle each firm tries to establish a link with partners having complementary competencies with a probability depending on some control parameters including: the number of allowed outgoing links (measuring the relational capability of the agents), the knowledge gap among agents, and the number of past links between two agents (measuring the level of embeddedness). The aim of each firm is to increase the level of its competencies by mutual knowledge transfer with linked partners. During the simulation, competencies levels are decreased at each cycle by a certain percentage determined by an obsolescence rate. Firms can die if they are not able to react to obsolescence by recovering competencies level through partnerships. Different simulative experiments were made in order to analyze the influence on emerging network structures of different levels of embeddedness. In particular we performed three kind of experiments: in the first one the creation of a link between two agents is mainly influenced by the number of past link between them (the past experience); in the second one the creation of a link is mainly influenced by the competencies gap between the agents; finally, in the third one the probability of a link creation is determined at the same time by the past experience and by the level of competencies gap. The first result of simulations is about network stability: for any value of simulation parameters a stable network emerged. With respect to the structure of this network we observed that the network topology obtained in the first and in the second experiment is a quasi-random network. In the third experiment, the structure of emerged network is like an “hubs and spoke” structure. In the final version of the paper we will present more in depth experimental sets and results. We will also discuss additional results concerning the performances of different networks in knowledge accumulation process and the implications of results from the theoretical and also from the policy making point of view.
Main References
The Role of Ecopreneurship in the Evolution of Environmental Management

Hien Nguyen* and Kevin Boberg1

Abstract

This paper presents an institutional framework for the existence of ecopreneurs and the institutional change in human behaviors toward protecting the environment. In the evolution of environmental management, within Colby’s five paradigms of environmental management in development, the world economy has passed the frontier economic phase and is most likely in the next phase, the environmental protection paradigm. With the support of advancement in technology and the growth of knowledge fund, ecopreneurs are found to be principally responsible for moving forward to a third stage of the environmental paradigm, Resource Management. Accompanying this will be the formation of new form and evolution of existing institutions.

Keywords: ecopreneur, institutions, institutional approach, ceremonial, instrumental, environmental management, paradigm, technological innovation, knowledge fund, sustainable economic development.

Introduction

Entrepreneurs are key agents and prime movers in economic development. Innovations introduced by entrepreneurs bring new combinations to the economy, such as new products, new methods, new markets, new resources and new organizational forms (Schumpeter 1950 and 1961). As entrepreneurship pervades almost every corner of development (High 2004), entrepreneurs play a critical role in any development process.

Entrepreneurship is driven by individualism with both economic and non-economic motivations. The motivations are greatly influenced by political and social institutions that govern the market process and formulate human behaviors (Glavan 2007). The institutions are formed in a process of natural selection within the limits of the natural environment, technology, and social and cultural values.

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(Adkisson 2009; Matutinovic 2007). As asserted by Veblen (1934), the development of institutions represents the development of society and institutions will change with the changing circumstances.

The global economy has evolved through different stages of development. After a long history of ignoring the impact of economic activities on the environment, environmental protection and sustainable economic development are beginning to attract a significant amount of attention from governments, organizations and individuals in every country. Institutions to manage the environment likewise have been created and evolved over time.

Both formal and informal institutions toward environmental protections have been formed and strengthened over years. Formal institutions can count on the formation of environmental agencies with regulations governing environmentally harmful activities. Informal institutions are individuals’ attitudes and increasing awareness toward protecting the environment. Together with technology and biology, these institutions influence the behaviors of entrepreneurs, creating a new form of more responsible entrepreneur: ecopreneurs.

Changes in the behaviors of individuals and entrepreneurs together with the existence of ecopreneurs in the society are analyzed under the framework of institutional change. Different typologies of ecopreneurs identified by Issac (2005) (green and green-green businesses) and Walley and Taylor (2005) (innovative opportunists, visionary champions, ethical mavericks, and ad-hoc enviropreneurs) closely fit the conventional institutional dichotomy, ceremonial and instrumental values. The expansion and promotion of ecopreneurship together with new institutions are formed from the cultural lag between ceremonial and instrumental behaviors in the progress of social changes (Veblen 1934; Bush 1987).

The formation of institutions concerned with environmental protection and the institutional changes in entrepreneurial behaviors greatly influence the progression of environmental management. Identifying levels of environmental concern and protection, Colby (1989) introduces the evolution of five paradigms of environmental management, namely Frontier Economics, Environmental Protection, Resource Management, Eco-Development and Deep Ecology. These paradigms go from extreme ignorance to extreme protection of the environment and can be seen shaping and being shaped by institutions devoted to environmental management in different levels of development.

The world economy has evolved through the first paradigm of Frontier Economics and is most likely in the second level, the Environmental Protection paradigm. Efforts to move to the next level,
Resource Management, have been promoted by governments, organizations and individuals in many countries in the world, especially the industrial countries. At this point in economic development and environmental stewardship, it is hypothesized that the individual – the ecopreneur – will be principally responsible for moving forward to the next stage of the environmental paradigm, Resource Management. Accompanying this will be the formation of new and evolution of existing institutions.

The remainder of the paper will address the issue of ecopreneurship in the following fashion. The first section examines the role of entrepreneurship in economic development. Next, the relationship between entrepreneurship, individualism and institutions is analyzed in the second section. Institutional change framework and the creation of ecopreneurs are discussed afterward. In next section, Colby's paradigms of environmental management with the existence of ecopreneurs are evaluated. Finally, a summary of findings will suggest opportunities for future research.

The Role of Entrepreneurship in Economic Development

The role of entrepreneurs has been studied since the work of Schumpeter (1950 and 1961) who emphasized the importance of innovations and innovators in economic development processes. According to Schumpeter, an entrepreneur is the central innovator and a prime mover in promoting economic development in a society. Innovations of entrepreneurs can be any forms of new combinations, such as new consumer goods, new methods of production or transportation, new markets, new sources of supply, or new forms of industrial organization. From anticipating what consumers need and/or reducing operating and production costs, entrepreneurs produce new consumer goods, and innovate to create and use the available resources and technology most efficiently. Innovational activities of entrepreneurs are the driving force behind economic development of any society.

Entrepreneurship pervades almost every corner of a society, creating incremental innovations that generate substantial cumulative effects over time (High 2004). Entrepreneurial activities permeate the social fabric and can be found practically everywhere, in religion, the military, politics, the arts, economic performance, and “wherever human activity attempts to alter its environment and influence the future” (High p.52). Entrepreneurial ventures are not necessarily small. Indeed, large corporations can be and often are entrepreneurial because of their willingness and capability to innovate (Drucker 1985). However, small entrepreneurial businesses with fewer than 100 employees innovate at a higher per-employee rate than their larger counterparts, especially in higher-technology industries (Malizia and
In addition to the evolutionary innovation, the sum of small innovations exerts long term cumulative effects and is a critical source of economic development.

Entrepreneurship has been perceived as the engine of economic and social development throughout the world (Audretsch et al 2006). The essential role of entrepreneurship in economic development has been increasingly acknowledged since the 1990s. The changing role of entrepreneurs reflects the increasing importance of innovations, especially in technological change and knowledge-based economic activity. Technological improvements and knowledge-based innovations become comparative advantages for developed countries. With the support of information technology and knowledge spillovers, knowledge created in one organization can become commercialized in a new venture locally and globally. Therefore, the cumulative effects of innovations in one country can spill over to other countries, making entrepreneurship a driving force of economic development in both developed and developing nations.

Entrepreneurial activities are most likely associated with improvements in technology. There is no historical record of sustained economic growth without technical change, that is, with no new combination and incremental innovation. New sectors, such as biotechnology, software, bioinformatics, nanotechnology and molecular electronics depend on the innovations of entrepreneurs for their development and survival (Suarez-Villa 2004). So do green technologies. In its dedication to clean technology innovation, Intel has released a plan to invest in eight new solar installations in four states of the US. This project involves in three newly formed sectors, namely biotechnology, molecular electronics and green technology. Entrepreneurs hasten the rate of diffusion of technological and scientific knowledge in the modern world. In return, the rapid diffusion of technological and scientific knowledge will promote innovations and entrepreneurial activities.

**Relationship between Individualism, Entrepreneurship and Institutions**

Individuality is established as societal value in the modern society (Matutinovic 2007). The prominence of individualism has promoted entrepreneurial activities and economic development in almost every developed and developing country. Entrepreneurship is driven by individualism that allows individuals to pursue their goals and derive pride from their own accomplishments. Entrepreneurs are individuals who have innovations and are motivated by self-interest and achievement of personal goals. Entrepreneurs could be inspired by economic and/or non-economic goals.
The majority of entrepreneurs are motivated by economic incentives. The most popular economic motivations that promote entrepreneurship are profits and market powers. In addition to economic motivations, non-economic motivations increasingly influence entrepreneurial activities, illustrated by the increasing number of social entrepreneurs in the society. These entrepreneurs are nonprofit and operate to solve social issues. Such motivations as desire for creativities, solving social issues or protecting environment becomes more and more popular in line with the economic motivations. Increasing number of entrepreneurial businesses is formed from both economic and non-economic incentives of entrepreneurs. These businesses can be formed from the desire of entrepreneurs to overcome poverty and create jobs for their families’ members and/or relatives or to protect the environment. Entrepreneurs with the motivations of protecting the environment are called ecopreneurs and number of ecopreneurs has been growing over years.

Motivations of individuals, whether entrepreneurs or not, are greatly influenced by social and political institutions of society. As suggested by Neale (1988) and adopted by Adkisson (2009), institutions can be identified by the patterns of human activity, the rules that give order to the activities, and the social beliefs or norms that explain both the activities and the rules. Institutions govern socioeconomic systems and regulate interactions between humans in society. Institutions are formed from the combination of different components, such as physical environment, worldview, belief, value, culture, technology and so on. The processes for the formation of institutions are complex and institutions are changing as any of the components change and the society move forward.

Institutions can be formal or informal constraints to human activities (Veciana and Urbano 2008). The formal constraints are governmental or organizational rules and regulations, such as constitutions, laws, economic rules, property rights, and so on. The informal constraints may include values, beliefs, norms, sanctions, taboos, customs, traditions, codes of conducts, habits, and such such. The informal constraints are important in themselves and not simply as appendices to formal institutions (North 1990). These formal and informal institutions regulate and influence activities as well as motivations of individuals, and hence entrepreneurs. The expansion and enhancement of institutions supporting environmental protection have led to the increasing number of ecopreneurs over the world.

Formal institutions to protect the environment are rules and regulations from governmental and organizational agencies concerned with environmental issues. Every country in the world has its own set of rules and regulations to eliminate the impacts of economic activities on the environment, some more numerous and impactful than others. A typical example of the formal institutions is the cap and trade
system with policies that regulate the limit on pollution and depletion of economic activities. In the U.S., the Environmental Protection Agency (EPA) enforces environmental laws and regulations through different acts and guidance, such as Resource Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TSCA), Clean Air Act (CAA), or Code of Federal Regulation (CFR) on Protection of Environment, and so on (www.epa.gov). According to the Global Competitiveness Report 2007-2008, German has the highest rank on overall stringency of environmental regulations, followed by New Zealand, Japan, Singapore and United Kingdom.

Together with green rules and regulations from governmental and organizational agencies, informal institutions whose purpose is protecting the environment have been formed and promoted. Efforts to communicate and educate people on environmental issues by the government, other societal organizations and individuals have led to the increasing awareness of individuals on impacts of human activities on the environment. As a result, other informal institutions, such as individuals’ attitudes, behaviors and habits toward protecting environment and consumers’ preference and expectation toward environmentally-friendly products, become more and more popular. Formal and informal institutions on protecting the environment give rise to the green movement in almost every country in the world.

Individuals, especially entrepreneurs, are actively and intensely engaged in the green movement. To date, ecopreneurs primarily originated in Australia and Europe and have begun to emerge if not flourish in the US in recent years (Allen and Malin 2008). Ecopreneurship in academic discussions has tended to focus on developed countries, such as Australia, New Zealand, EU and US (Issac 2005; de Bruin and Lewis 2005; O’Rourke 2005). Activities of ecopreneurs with the focus on eco-friendly solutions are also promoted in developing countries, such as India, Nepal, Brazil and Mexico (Issac 2005; Pastakia 1998 and 2005; O’Rourke 2005; Kruks-Wisner 2005), a trend which is reflected in academic discussion as well.

Ecopreneurs often take the form of counter-culture or social entrepreneurs. Similar to other “regular” entrepreneurs, ecopreneurs are risk-takers and face the possibility of failure. The differences of these ecopreneurs are their intention to protect environment, their desire to move to more sustainable future path and the overall positive effects of their commercial activities on the environment (Schaper 2005). Although facing higher possibility of failure as the environmental-protection products are relatively more expensive, the green movement on consumer behaviors make ecoprenuerial businesses profitable and number of ecopreneurs increasing over years.


**Institutional Change Framework for the Promotion of Ecopreneurship**

The existence of ecopreneurs results from changes in behavioral patterns and social institutions concerned with and protecting the environment. The current social and individual attitudes and awareness for the environment are the outcomes of the institutional change process that involve interactions and correlation among ceremonially behavioral patterns and instrumentally behavioral patterns. The correlation of these behavioral patterns is the unique function of ceremonial and instrumental values in society. These values link individual’s behaviors and determine the characteristics of the behavior patterns. The process of combining these values and behavior patterns forms institutions in society.

According to Bush (1987), ceremonial values correlate behavior within the institution by “providing the standards of judgment for invidious distinctions, which prescribe status, differential privileges, and master-servant relationships, and warrant the exercise of power by one social class over another”. Instrumental values correlate behavior by “providing the standards of judgment by which tools and skills are employed in the application of evidentially warranted knowledge to the problem-solving processes of the community” (p.1079-1080). A behavior of individual may have either ceremonial or instrumental values. Some ceremonially behavioral patterns may incorporate instrumental behavior and some instrumentally behavioral patterns may incorporate ceremonial behavior.

As other individuals, ecopreneurs incorporate ceremonial and/or instrumental values in their economic activities. Their behavioral patterns and types of business are determined from ceremonial and instrumental values of their motivations. Different typologies of ecopreneurs defined by Issak (2005) and Walley and Taylor (2005) could be used to explain ceremonial and/or instrumental behavioral patterns of the ecopreneurs.

Issak (2005) categorizes ecopreneurs into “green businesses” and “green-green businesses.” A typical “green business” does not have ecological concerns from inception, but instead made a green move as the managers realized the advantages of being green in the marketing strategy. According to Issak, the ideal type of ecopreneur will create “green-green business” with the green intention formed from the start-up. The green businesses, by this definition, are likely to have more ceremonial behaviors in the first place. In the early stage of green movement, the ceremonial behaviors could be prominent as producers want to maximize their profits adding green components to their marketing strategy.
However, this is not the sustainable way of doing businesses, especially in a democratic environment with developed media system. The institutional change in business management toward sustainable development results in more instrumental behaviors from green businesses. The green-green businesses, by definition of Issak, are more likely to have instrumental behaviors and expected to be growing in terms of both quantity and quality.

Walley and Taylor (2005) present four types of ecopreneurs, namely innovative opportunists, visionary champions, ethical mavericks, and ad-hoc enviropreneurs. The first two types are influenced by hard structural drivers, such as government regulation and economic incentives, together with other market-driven and value-driven signals from green consumers. The reactions to government regulations of these ecopreneurs are more likely reflect their ceremonial behaviors. The latter two types are influenced by soft structural drivers, like family and friends, past experiences, personal networks and education. With the objectives of protecting the environment, and the influences of social institutions, these ecopreneurs could have the instrumental behaviors in their business activities. While the innovative opportunists and ad-hoc enviropreneurs are financially oriented, the visionary champions and ethical mavericks focus on sustainability orientation.

Ceremonial values emanate from human nature and ceremonial behavioral patterns are believed to be dominant in every culture (Bush 1987). The dominance of ceremonial behaviors represents the cultural lags of new institutions. The culture lag of individual behavior involves the pass-binding characteristics and the time lag for the adaption of new institutions. The behaviors of ecopreneurs in the early stage of environmental protection may incorporate more ceremonial values than instrumental values. “Green businesses” or “innovative opportunists” and “visionary champions” may be seen more often than “green-green businesses” or “ethical mavericks” and “ad-hoc enviropreneurs” as a result of the cultural lag in individuals’ behaviors.

New patterns of behaviors often start with ceremonial dominance and the level of dominance will increase or decrease in the institutional change process. Institutional change results from a change in the value structure of institutions. The value structure reflects the combination of ceremonial and instrumental values and the change in the value structure of an institution is measured by the index of ceremonial dominance. According to Bush (1987), the index of ceremonial dominance indicates the dominance of ceremonial warranted values over instrumentally warranted values. An increase or decrease in the index of ceremonial dominance represents regressive or progressive institutional change. Progressive institutional change is characterized by the displacement of ceremonial patterns of
behavior by instrumental patterns of behavior. Institutional change does not happen if the index of ceremonial dominance remains unchanged. In other words, institutional behaviors of individual in society will not change if ceremonially warranted patterns of behavior increase at the same rate as instrumentally warranted patterns of behavior.

Changes in value structures in society, therefore, influence ecopreneurs’ behavior. The progressive institutional change on human behaviors toward environmental protection will result in the increasing number of ecopreneurs with instrumentally warranted patterns of behavior. The result will be inverted if a society experiences a regressive institutional change or unchanged institutional behaviors on environmental protection. The current green movement and initiatives in almost every country reflect the decrease in the index of ceremonial dominance or the progressive institutional change on environmental issues. Accordingly, the “green-green businesses” or “ethical mavericks” and “ad-hoc enviropreneurs” will or are gradually beginning to exceed the number of “green businesses” or “innovative opportunists” and “visionary champions”.

Institutional change process combines the interactions of different components having formed institutions. Technological innovations and knowledge fund, the pool of knowledge of and available for individuals in society, are crucial factors in the process of institution change. New patterns of behavior are required to accommodate the diffusion of new technology and the broadening of human knowledge fund (Bush 1987). The current green movement is the outcome of interactions among different factors that promote the recognition on harmful impact of economic activities on the environment, the advancement of technology and the development of knowledge fund.

Technological innovations have always contributed to the scope and intensity of human impacts on the environment (Matutinovic 2007). Technological innovation can originate from any area of social and economic activities and appear more frequently in a culture with high degree of permissiveness in ceremonial practices (Bush 1987). Technological innovations are developed on existing technologies and adapted to the new institutional arrangement. Changes in the trend of technological innovations reflect the change in individual habits of thought and the progressive institutional change. The current trend of technological innovations, once again, indicates the progressive institutional change of social and individual behaviors on the environment.

The advancement of technology enhances the accumulation and expansion of the knowledge fund, a dynamic force for institutional change. The fund of knowledge in embedded in ceremonial and instrumental patterns of behaviors, hence is incorporated in the value structure of society. Incremental
contributions to the knowledge fund come from every corner of human life, eventually influencing institutional value structure and the process of institutional change in society. The high rate of technological innovations and extensive fund of knowledge give rise to the displacement of ceremonial behaviors by instrumental behaviors and advantageous for progressive institutional change. This is the interrelated process. High rate of technology innovations and the growth of the knowledge fund are forces and also outcome of progressive institutional change. Institutional change process, therefore, is happening faster in the modern society.

Technological advancement, as most recently evidenced by and especially the development of the Internet, reinforces the breadth and depth of the knowledge fund in every society. Green movement spreads out almost everywhere, breaking down the barriers of ceremonial values on environmental protection. The existence of ecopreneurs and the development of ecopreneurship toward more instrumental warranted patterns of behaviors reflect the progressive institutional change in value structure of environmental protection. This progressive change happens at all levels (individual, organizational, governmental…) of environmental management. As “institutions are a creation of human beings” (North 1990 p.5) and individual behaviors are central to institutional change, ecopreneurs have been and will be active actors to promote technological innovations and progressive institutional change on environmental management practice.

Colby’s Paradigms of Environmental Management

Environmental management becomes a growing concern of governments and non-governmental organizations as the problems of environmental degradation are more and more obvious. Identifying the level of concern and sense of urgency of the environment management, Colby (1989) introduced the evolution of five paradigms of environmental management in development, namely Frontier Economics, Environmental Protection, Resource Management, Eco-Development and Deep Ecology. The level of environmental protection goes from extremely ignore to extremely protect environment. The five paradigms presented by Colby could be seen as guidelines for environment management in different level of development.

Frontier Economics

The prominent feature of the institutions in the society under the Frontier Economic management paradigm is the social belief in infinite growth and economic prosperity. The Frontier Economics treats nature as an infinite supply of physical resources to be used for human benefits in any
forms that cause pollution and ecological degradation. Natural environment was generally perceived as an inexhaustible source of material inputs to the economic machinery. Economic models, such as the production model, most likely consider only labor, capital, and, in some cases, technology. Natural resources are exploited to maximize the material quality of human life but environmental issues and impact of polluted activities on human standard of living, such as human health and natural amenities, is largely ignored in the paradigm.

**Environmental Protection**

In this Environmental Protection paradigm, the extensive exploration of natural resources has been corrected by different institutionalized regulation implemented most likely in industrial countries. Environmental degradation is largely concerned as the impacts of pollution on human health and endangered species. Environmental Protection Agencies were created to regulate activities that have impacts on environment. Environmental impact statements are required to measure costs and benefits to environment before any development activities begin. Environmental protection in this period involves repairing, setting limits to harmful activity and cleaning up if limits are exceeded. In Colby words, this paradigm is only a modest variation that shows up as added costs on the frontier economics paradigm. Concerns on environment are somehow considered as anti-development.

**Resource Management**

The Resource Management paradigm emphasized the need to increase the efficiency of resource allocation. It is in higher level of environmental protection and conservation compared to Environmental Protection paradigm. In the Resource Management paradigm, sustainable development is promoted with the increasing concerns for the environment. Resource management could be performed through conservation, wise management, technology advancement and policies that integrated economic and ecological principles. In this paradigm, sustainability, especially long-term sustainability of resource use, is seen as necessary constraint for economic development.

**Eco-Development**

The Eco-Development paradigm includes and expands the Resource Management toward the environmental conservation. The dominant imperative in this paradigm is the “green growth” that is based on the information intensiveness, community consciousness and experiential quality of economic activity. The eco-development emphasizes on the ecological relationships among people and nature in communities, among communities sharing same eco-regions, and among eco-regions cooperating to sustain the shared ecosphere of the planet. It makes explicit social, ecological, and economic criteria for
the development and the use of technology, and incorporates many social equity and cultural concerns to the development.

**Deep Ecology**

Frontier Economics and Deep Ecology are two extreme paradigms in the five paradigms of environmental management in development. While Frontier Economics extremely ignores the environment to promote economic growth, Deep Ecology is extremely conservative toward environment with the dominant imperative of anti-growth and constrained harmony with nature. Deep Ecology puts man under nature, and is in favor of “do with enough”. Deep ecologists perceive the idea that technology fixes usually leads to larger, more costly and intractable problems to environment and expect the world to return to pre-industrial, rural lifestyles and standards of living. This paradigm is proposed in paper as a polar opposite of frontier economics but is impossible in practice at the current population levels and rural land degradation.

During the course of socio-economic development, world economy has passed through some of the paradigms mentioned above. Frontier economics was dominant in economic theory and practice before 1960s. Many schools of economic thought had developed during that period to explain economic activities and economic development. The importance of entrepreneurs to economic development has been emphasized and the number of entrepreneurs and entrepreneurial innovations has increased over years. However, the importance of environmental pollution from economic activities was largely ignored in any explanation of economic activities and development in this period. Institutional economists have treated non-economic variables as endogenous factors to explain economic phenomena, but non-economic factors are complicated and hard to measure.

Frontier economics began to weaken in the 1960s. With the additional impacts of population growth, by the end of 1960s, economic development under frontier economics had resulted in serious environmental problems, such as ozone layer depletion, loss of biodiversity and desertification, and global warming, drawing special attentions from government of every countries. The urgency of environmental issues has moved environmental management practice to the next paradigm in development, Environmental Protection. Individual behaviors toward environmental protection in this period mostly incorporate ceremonial characteristics. Entrepreneurs were mostly motivated by profit and their environmental concerns are subject to the institutionalized regulations from governments and governmental agencies.
Toward the last decade of the 20th century, environmental issues drew much greater attention from governments, organizations and individuals in both developing and developed countries. The growth of knowledge fund on environmental issues has led to the change in value structure of society. In addition to the regulations from governmental organizations, informal institutions in favor of environmental protection were largely formed. These institutions have affected social and individual behaviors on environmental issues. Ceremonially warranted patterns of individual and entrepreneurial behaviors start to be displaced by instrumentally warranted patterns of behaviors. Green movement, since then, has been featured by consumers’ behaviors and ecopreneurial innovations toward safe and environmentally benign products and services. However, the progressive institutional change is not large enough to move environmental management to the next level, the Resource Management paradigm.

A prominent feature of the Resource Management paradigm is the emphasis on the efficiency of resource allocation that could be enhance by innovational activities. Similar to the role of entrepreneurs in economic development, ecopreneurs, a primary source of green innovations, will be a leading force for the movement toward Resource Management paradigm of Colby’s environmental management. Technological innovations to energy saving and environmental protection have been promoted by ecopreneurs over the last decade. Technological innovations and the growth of knowledge funds on environmental issues have increased the awareness of individuals on protecting environment and the number of ecopreneurs over years. Ecopreneurs, therefore, are outcomes and also forces of the expansion in knowledge funds and technological innovations, which give rise to the progressive institutional change on environmental protection.

The progressive institutional change as a result of ecopreneurial activities do not limit within a boundary of a country or continent. Technological innovations and the growth of knowledge fund have been spread out to every country in the world. Number of ecopreneurs with instrumental behaviors will continue to increase in every society. The incremental importance of ecopreneurs on environmental protection will be strengthened over years with the progressive change of institutions.

**Conclusion**

The increasing number of ecopreneurs over the past decade is a result of the progressive institutional change of individual behaviors on environmental issues. Ecopreneurs have promoted the growth of fund of knowledge about and contributed to the further progressive change of the institutions.
on environmental protection. As a force for green innovations, ecopreneurs will be principally responsible for moving forward to the next stage of Colby’s environmental paradigm, the Resource Management. The importance of ecopreneurs on environmental protection and therefore sustainable economic development requires more attention from governments and economic development organizations.

This paper focused on the institutional change process and the role of ecopreneurs in the evolution of environmental management. Many other aspects of ecopreneurial and entrepreneurial issues, such as translating creativity into innovation and its diffusion, institutional factors facilitating and inhibiting ecopreneurs, demographic and psychographic influences on ecopreneurship and so on are still uncovered. Further study on ecopreneurship is needed to promote the development of ecopreneurs and the sustainable economic development of society.

Reference


The emergence and growth experienced by many developing countries is associated with the development of some key sectors with strong potential to lead the technological catching-up processes and economic improvement (Malerba 2002). Information and Communication Technology (ICT), especially the software industry, brings to the forefront the enormous potential for catching-up, based mainly upon cost advantages and economic transparency (Soete 2005). The software industry is positively impacting different economic areas around the world by enhancing innovation, facilitating the development of new business models or shifting global capabilities. Over 4 percent of total worldwide employment are related to ICT-specialist occupations (e.g. engineers, software developers, etc.); over 20 percent of worldwide jobs are occupations that use ICT (OECD 2008).

Many developing countries have instituted policies to cater to specialized software sectors and incentivized Multinational Corporations (MNCs) to invest. These policies, for example, income taxes holidays, import duty exceptions, or infrastructure subsidies, are designed to maximize the foreign investment externality technology transfer pay-off (Aitken and Harrison 1999).

Scholars focus on elucidating those externalities and the other positive spillover effects of MNCs flowing to SMEs in emerging sectors. Altenburg (2000) discusses the different types of linkages and spillovers in developing countries and gives some policies to develop and upgrade local SMEs. Alfaro and Rodriguez Clerk (2003) explore the horizontal and vertical integration externalities from MNCs in developing countries. Aitken, Hanson et al. (1997) and
Fosfuri, Motta et al. (2001) found evidence of technological spillovers due to worker’s mobility from Multinationals to local firms. Altenburg also suggests some other spillover-effects not entirely related to technology transfer, such as: Opening or gaining access to new export markets; preparing the field for followers; introducing new management techniques; or developing new ways of inter-firm division of labor. Previous literature reviews highlight the positive effects of an MNC’s investment in emerging and developing countries but there is a lack of evidence about negative effects.

The present discussion paper shows how the multinational software corporations negatively impact the innovation processes of small and medium software development firms in an emerging technological sector.

Between 2000 and 2002 the government of Córdoba, Argentina – spatial location of the research – began a host of new policies designed to attract multinational software development companies, which demanded a number of technical skilled employees that largely exceeded the normal wage, creating negative consequences in the development and operation of the local companies.

The research is composed of 62 local SMEs involved in the IT industry out of a total 170 that were strongly related with software development. The interviews were conducted in the place of business with the owner or a key manager. Data were gathered on the basis of a questionnaire made up of 40 queries (110 questions counting the sub-questions).

The results showed an accelerated rising wage and a massive turnover of the technical skilled employees in the region immediately after the settlement of the first MNCs. This effect is largely justified on the power of the multinationals at the time to attract qualified employees paying wages almost impossible to match by small local companies. Innovation performance meant comparing the SMEs settled before and after the massive entrance of the MNC. Local
SMEs which started their activities before the settlement of the large corporations show an acceptable innovation performance, despite the fact they struggled to afford the accelerated rising wages and massive technical skilled employee turnover. Most young companies, which started after the settlement of the multinationals, could never develop their innovation capabilities and showed a very poor performance in innovation issues.

The results shed light on a number of issues to be considered by local governments when they develop policies aiming at attracting foreign investment, especially when the investment requires qualified or skilled employees. These employees are, on a global scale, considered to be a scarce resource, especially in the case of the software industry. Policies must focus on local SMEs, promoting linkages and cooperation between SMEs and MNCs in order to achieve positive technological spillovers into the region.

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The impact of relevance marketing on credit collections within an emerging market micro finance institution (MFI)

Marc Joubert

Abstract

The development and implementation of a marketing campaign aimed at reducing the number of drop off accounts purported to prove that customers incentivised to remain current are less likely to default on their loan repayments than customers not incentivised to remain current. The results of the six month initiative show positive, albeit inconsistent results in reducing the number of drop off accounts.

Introduction

In 2006, Mohammed Yunus was awarded the Nobel Peace Prize, the same year saw MFI’s reach around one hundred and thirty million customers worldwide (Daley-Harris 2007). Lending to the poor has become such big business that it now occupies entire sectors in most, if not all, economies. This alternative financial sector, also called ‘fringe banking’ (Caskey 1994), ‘bootstrap capital’ (Servon 1999) or microcredit has relegated the poor and near-poor ‘to expensive and, in many cases, poorly regulated alternatives' (Drysdale & Keest 2000). For the most part, microcredit operations in many emerging markets are conducted through non-banking institutions or MFI’s. Standard and Poor’s defines an MFI as an organisation ‘providing small loans and financial services to low income and/or financially underserved clients’, and conventional wisdom has held that for many years, MFI’s have had a significant impact on poverty alleviation around the
world (Toye 1993; Yunus 1994; McPherson 1996; Mead & Liedholm 1998; Murdoch 1999; Weber 2002; Zohir and Matin 2004; Bakhtiari 2006; Hietalahti & Linden 2006; Cuong 2007; Mondal 2009). As such, and in particular reference to Africa, Mwenda & Muuka (2004) view MFI’s as becoming more and more ‘critical to Africa’s quest for solutions to the continent’s development challenge’. African MFI’s find themselves in a precarious position where the market is becoming more competitive due to the increased competition from commercial banks like Standard Bank through its Stanbic Bank operation, Deutsche Bank, and Citi Bank and global networks such as ACCION, FINCA, BRAC, ASA, Advans, and MicroCred. This along with the fact that, globally, MFI’s have started moving from predominantly non-profit models to for-profit models (Navajas, Conning, and Gonzalez-Vega 2003; Schreiner 2004), means that MFI’s must find ways of becoming more competitive and relevant if they are to remain sustainable. For the purposes of this paper, sustainability is broadly defined as ‘the ability to cover costs and to continue operations without resorting to gifts, subsidies and debt relief or without keeping depositors savings illiquid’ (De Crombrugghe, Tenikue, and Sureda 2008). The impact of these large financial institutions showing interest in microfinance means an increase in access to credit for the poor and lower income individuals which in turn compounds the challenges faced by MFI’s, such as; access to funding or subsidisation (Pollinger, Outhwaite, and Cordero-Guzman 2007), cost reduction (Caudill, Gropper, and Hartarska 2009), interest rates, regulation, outreach (Johnston, Yeargin, Brundige, and Payne 2006 and Karlan & Zinman 2008), and increased relevance through product diversification (Turvey & Kong 2009).
**Purpose**

Sustainability impacts on and could threaten the very existence of an MFI and in the case of a growing South African MFI concerning itself with the business of micro-lending, the level of non-paying loans is a serious cause for concern that is impacting on the future sustainability of the organisation. The objective of this paper is to analyse the impact of marketing related incentives on customer loan repayment behaviour. The aim is to show that customers incentivised to remain current are less likely to default on their loan repayments than customers not incentivised to remain current in the belief that improved loan repayment will improve the long-term sustainability outlook of the organisation.

**Background and Theory**

Microfinance, specifically micro-credit, operates on two basic levels; either a joint liability level or individual liability level.

Joint liability or group liability is the traditional association when referring to microfinance and ‘is often cited as a key innovation responsible for the expansion of access to credit for the poor in developing countries’ (Giné & Karlan 2008). The original model of collateral free micro-credit began as a group-based initiative through Kaligram Krishi Bank in Bangladesh at the beginning of the twentieth century (Mondal 2002) and has undergone numerous modifications. The original model as conceived by Rabindranath Tagore required the borrower to belong to a group of five individuals, who would guarantee repayment of each loan before being offered a new loan. Subsequent models
have modified the level of group involvement resulting in the formation of villages, associations or centre structures comprising between twenty to forty individuals. These models operate on the premise that the entire group within a specific community are responsible for the loans given to individuals within the group. Based on homogenous matching, this model; where group members ‘have an incentive to screen other clients so that only trustworthy individuals are allowed into the program’ (Giné & Karlan 2009), has proven to work well not only with the poorest of lenders (Vigenina & Kritikos 2004) through its reliance on peer pressure and group monitoring to ensure that individuals repay their loans. The reluctance to default on loan repayment is based either on the principle of ‘shame’ (Karim 2008) or that of ‘lender of last resort’ – from the perspective that defaulters will have no alternative finance options available to them. The group model, as popularised by Grameen Bank, is currently used in developing countries around the world (Dalglieh & Matthews 2009), and shows varying degrees of success; from the sixty three percent repayment rate as highlighted in an Indian study conducted by Deininger and Liu (2009) to the success’ of a ninety five percent repayment in a Bolivian study (Schreiner 2004) to that of Grameen Bank as ‘demonstrated through its 98 percent rate of recovery.’ (Karim 2008)

Individual lending, traditionally the domain of banks and non-banking institutions, has started gaining more favour among MFI’s (Lehner 2008; Giné & Karlan 2009). The major difference in individual lending lies in the need for and use of traditional credit screening methodologies and technologies, the requirement of collateral in some cases and the reliance on some form of individual monitoring by the MFI, with much of the theory in this regard pointing to the critical nature of individual monitoring (Zeitinger 1996; Armendáriz de Aghion & Murdoch 2000; Dellien, Burnett, Gincherman, and Lynch
2005; Gangopadhyay & Lensink 2007; Champagne, Tjossem, Ohman, Pikholz, and Cracknell 2007). Individual lending, where the individual is solely responsible for the repayment of the loan via a loan officer, or by depositing directly into the bank account of the MFI, works on a similar premise to group lending; that of incentivisation and/or fear. Repayment of loans, in most cases, results in ongoing access to additional funds while failure to repay loans results in the sale of any collateral, repossessions or even legal action.

The literature on the analysis between group and individual lending is substantially weighted in favour of group lending, however, that which exists on a comparative basis shows that there is no statistically significant difference in loan repayment when comparing group lending to individual lending (Greif 1994; Giné & Karlan 2009) suggesting that the monitoring differences in group versus individual lending may be unimportant. In fact in a study conducted in Georgia (Vigenina & Kritikos 2004), not only were the findings consistent with the above statement in so far as it found that a combination of individual and group loans should be offered by MFI’s as ‘there is no better design’, the study suggested that individual and group liability offerings should be offered as a product suite as they ‘dovetail the micro-finance movement’. According to the World Bank, the average return on assets (ROA) for group-based models, this includes village banks and solidarity groups, is negative while individual lending shows a positive, albeit small, ROA. Irrespective of the level of operation, customers defaulting on loan repayments, impacts on the sustainability and could potentially result in the eventual closure of an MFI whose core business is credit extension. The literature on loan repayment performance, particularly with regards to payment arrangements and incentives for contractual repayment behaviour, is limited and that which does exist -
showing factors affecting repayment performance - varies greatly in its results (Ahlin & Towsend 2007; Cull, Demirgüç-Kunt, and Murdoch 2006). Non payment is a business risk, with repayment performance relying on the existence of an efficient credit management policy; commencing with a reliable scoring model, to agreements clearly stating the terms of the loan and its repayment through to ongoing regular contact with the individual, irrespective of the level of liability.

The recent global credit crisis resulted in South Africa, a developing country and an emerging market, experiencing its first recession in seventeen years. Commencing in the first quarter, 2009 was characterised by rising unemployment, low imports and exports, and contracting economic activity (Financial Mail, 18 December 2009). This led to an increase in default rates due to the fact that a growing number of customers could not keep up payments on their financial obligations. This despite the fact that, financial trend surveys conducted by the Bureau of Market Research (CFVI Fourth Quarter), a South African research institute involved in socioeconomic research since 1960, showed that customers’ ability to service their debt had improved more than 10 percent during the past twelve months.

The organisation under review is a South African MFI concerning itself with the business of short-term and long-term unsecured micro-lending, a category of financial services to low income customers. The modus operandi of the organisation is to offer individual loans to customers on the basis that they comply with the following minimum criteria:

- Potential customers are required to be South African citizens,
- have a bank account, and
- earn at least R2,000 ($270) per month
In order to validate the above requirements, customers are required to furnish proof of the above criteria by supplying copies of the following documentation, namely;

- Copy of their South African identity document,
- Three consecutive months’ bank statements, and
- Their latest payslip

The above information, along with certain demographic and financial information – as mandated by the National Credit Act, No. 34 of 2005 (NCA) and as regulated by the National Credit Regulator (in terms of NCA Chapter 2, Part A) - allows the MFI to assess affordability and determine whether either a short-term or longer term unsecured loan will be approved and ultimately disbursed to the individual.

Up until October 2009, the organisation had experienced contractual arrears of 26.6 percent of the capital at risk (CAR) averaged over the preceding six months. Given that a credit collections strategy was in place – utilising traditional approaches such as self collection, use of external debt collectors and ultimately the legal system, the business required an intervention that would mitigate the business risk of lower than expected loan repayment rates.

There have been many suggestions on the use of risk reducing initiatives to ensure loan repayments and in so doing ensure the sustainability of MFI’s. Baumann (2004) points to the improved overall organisational cost-efficiency and productivity, Schreiner (2004) suggests the use of predictive scoring models to ‘cut the cost of judging the credit risk of the self-employed poor’, a case study by Hartungi (2007) of BRI village units in South Sulawesi, Indonesia, showed how the use of innovative collateral choices not only made credit an interesting proposition but also served as compensation in the event of any repayment issues. Another suggestion emanates from China where Turvey and Kong (2009) point to the potential of using insurance in the form of crop, weather
and pricing insurance as financial leverage. As a result, the marketing department was approached to develop a marketing initiative that would assist in the drive towards ensuring the ongoing repayment of loans by current customers - current customers being defined as not having defaulted on loan repayments.

If according to the Boone and Kurtz (1998) definition, ‘marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, services, organizations, and events to create and maintain relationships that will satisfy individual and organizational objectives’, then the problem required the marketing department to entice ongoing commitment from current customers toward loan repayment ultimately benefiting all of the MFI’s six groups of stakeholders as highlighted by Schreiner (1998). Figure 1 shows how, according to Pollinger, Outhwaite, and Cordero-Guzman (2007), marketing drives the business model in terms of the volume of potential borrowers that an MFI is able to access and the pool of loans it can develop.

**FIGURE 1:**

**Relationship-Based Financing Schematic for Microfinance Institutions**

From a literature review, there has been much written on the correlation between marketing activities and various aspects of business performance, namely; sales (Jagpal 1981; Tellis & Weiss 1995; Kapil & Shoemaker 2004; Mumel, Hocevar, and
Snoj 2007); profitability (Srinivasan & Anderson 1998; Reid 2003); customer retention (Lewis 2004; Mumel, Hocevar, and Snoj 2007).

In line with the recommendations as outlined in the collaborative global report “From Exclusion to Inclusion through Microfinance”, MFI’s need to recognises that, as an organisation which offer access to financial services, we serve a unique target market requiring innovation in reaching and serving this audience with relevant products and services as suggested by Turvey and Kong (2009) following their study of 400 farm households in Shaanxi Province, China. With this notion in mind and given the lower cost of better retention in comparison to better acquisition (McDonald & Wilson 2002) and in conjunction with the four C’s: Cost, Convenience, Communications and Consumer wants and needs as outlined by Schultz, Tannenbaum, and Lauterborn (1993), the over-arching business strategy of creating a compelling market customer value proposition was applied to improving the quality of life of our customers by offering a relevant and targeted incentive plan as a reward for ongoing contractual repayment behaviour.

**The Analysis**

In order to commence with our investigation, few key issues needed to be answered; firstly, what would constitute a relevant customer offer and secondly, would it be compelling enough to be a value proposition good enough to induce ongoing loan repayment?

An analysis of the customer and their situation, more specifically, an analysis of the customer’s bank statements revealed that a high proportion of existing customers had
at least one insurance policy reflecting on their monthly bank statements. The specifics of the particular insurance policy in each case are unknown; however, information from the Johannesburg Poverty and Livelihood Study (JPLS) showed that ‘the most frequent life changing event was the death of a member of the household or of someone closely related to the household’.

### TABLE 1: Households with Deceased Members

<table>
<thead>
<tr>
<th>Researched Regions within the City of Johannesburg</th>
<th>Percentage of households with one or more deceased during the past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region A</td>
<td>5%</td>
</tr>
<tr>
<td>Region B</td>
<td>2%</td>
</tr>
<tr>
<td>Region C</td>
<td>5%</td>
</tr>
<tr>
<td>Region D</td>
<td>15%</td>
</tr>
<tr>
<td>Region E</td>
<td>11%</td>
</tr>
<tr>
<td>Region F</td>
<td>10%</td>
</tr>
<tr>
<td>Region G</td>
<td>16%</td>
</tr>
<tr>
<td>Region H</td>
<td>15%</td>
</tr>
<tr>
<td><strong>OVERALL</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

Source: Adapted from the Johannesburg Poverty and Livelihood Study (2008)

As a result and in conjunction with insight from our insurance partner, we developed the idea of offering all contractual customers a microinsurance product in the form of a free R5,000 funeral plan, which in the event of the loan account holder passing away, the remaining family members would receive a benefit a R5,000 towards the funeral of the departed. The offer and its benefits would exist for the entire duration of the loan but would be suspended should the customer fail to make their required monthly loan payment; the benefit would however be reinstated once the loan account was up-to-date. Cohen and McCord (2003) describe microinsurance as ‘a system of protecting poor people against specific shocks using risk pooling in return for regular affordable premium payments proportionate too the likelihood and cost of the risk involved.'
Appropriate delivery mechanisms, procedures, premiums, and the coverage, define microinsurance policies that respond to the limited and variable cash flow of low-income households, and the often unstable economic environment in which they live’. Because financial resources available to the poor are so limited, Roth, McCord, and Liber (2007) comment that ‘poor people can experience great financial disruption when unexpected events befall on them. Even small sums insured can ensure some protection and peace of mind (and dignity) for a poor person’.

In order to validate the hypothesis of customers incentivised to remain current are less likely to default than customers not incentivised to remain current, the following data was collected:

- The total number of current accounts per month, and

- The total number of drop off accounts per month - drop off accounts are defined as current accounts that have defaulted on repayments in the last month.

The data was sourced from account repayment information six months prior to implementation of the marketing initiative. The time period analysed is April 2009 to September 2009, and six months after implementation of the marketing initiative, October 2009 to March 2010. The first analysis looks at identifying the rate of change of drop off accounts before the implementation of the incentive plan while the second analysis identifies the rate of change of drop off accounts after the implementation of the incentive plan. The determination of success or failure of the hypothesis was the outcome of a test of the statistical significance of the difference between the rates of change of drop off accounts pre-implementation and post-implementation.
Analysis of the number of drop off accounts post-implementation versus pre-implementation reveal the following statistics:

- **Month One** – a nine percent *reduction* in drop off accounts against a total base growth of seventeen percent,

- **Month Two** - a thirty-nine percent *increase* in drop off accounts against a total base growth of fourteen percent,

- **Month Three** - a twelve percent *increase* in drop off accounts against a total base growth of seventeen percent,

- **Month Four** - a sixty percent *increase* in drop off accounts against a total base growth of nineteen percent,

- **Month Five** - a two percent *reduction* in drop off accounts against a total base growth of fourteen percent, and

- **Month Six** - a nine percent *increase* in drop off accounts against a total base growth of twelve percent.

The average drop off rate for the six months prior to implementation of the marketing initiative is seven hundred and sixty two accounts while in the six months after the implementation of the marketing initiative, the average drop off rate is one thousand and twenty six accounts – growth of thirty five percent on a total base growth of sixteen percent.

Interestingly, table 2 shows that in a six month comparison reflecting post-implementation versus pre-implementation versus previous year;
• comparing post-implementation to pre-implementation, four of the six months post-implementation show slightly reduced drop off percentages, and

• comparing post-implementation this year (TY) to same period last year (LY), two of the six months post-implementation show reduced drop off percentages.

### TABLE 2:
Drop Offs as a Percentage of Total Base

<table>
<thead>
<tr>
<th>Month</th>
<th>Percent</th>
<th>Pre-Implementation</th>
<th>Percent</th>
<th>Post-implementation</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>2.3%</td>
<td>Apr</td>
<td>3.8%</td>
<td>Oct</td>
<td>3.0%</td>
</tr>
<tr>
<td>Nov</td>
<td>4.0%</td>
<td>May</td>
<td>2.9%</td>
<td>Nov</td>
<td>4.1%</td>
</tr>
<tr>
<td>Dec</td>
<td>8.4%</td>
<td>Jun</td>
<td>5.1%</td>
<td>Dec</td>
<td>5.0%</td>
</tr>
<tr>
<td>Jan</td>
<td>2.8%</td>
<td>Jul</td>
<td>3.6%</td>
<td>Jan</td>
<td>7.4%</td>
</tr>
<tr>
<td>Feb</td>
<td>3.5%</td>
<td>Aug</td>
<td>3.5%</td>
<td>Feb</td>
<td>2.9%</td>
</tr>
<tr>
<td>Mar</td>
<td>3.0%</td>
<td>Sep</td>
<td>4.1%</td>
<td>Mar</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

Analysing the drop off accounts before the implementation of the marketing initiative the results show a 0.0086 change in slope with an average of 0.0375 that has a standard deviation of 0.0077.

The analysis of the drop off accounts after the implementation of the marketing initiative, show a change in slope of 0.0186 with an average of 0.0434 and standard deviation of 0.0167. The difference in the rates of change of drop off accounts pre-implementation and post-implementation are negligible, amounting to a slope of 0.0391 and a mean of 0.3575 which are not statistically significant.
Findings

Following on from the analysis of the performance of the marketing initiative and its impact on the drop off accounts, the findings are inconclusive for the following reasons:

- Insufficient data – six months of data is insufficient in order to prove conclusively whether customers incentivised to remain current are less likely to default than customers not incentivised to remain current, especially when one considers the erratic results of the first four months, in the post-implementation versus pre-implementation comparison, and the relatively consistent positive results of the last two months, namely February and March 2010.

- Timing of the initiative may have been a contributing factor in not being able to prove the hypothesis. The months of December and January are historically bad months for loan repayments, considering that December and January are the Holiday and Back-to-School seasons for most, if not all, of the customers concerned. This period seriously impacts on the ability of individuals to honour their financial commitments which has been further compounded by the recent recession. However, this fact was considered at the inception of the initiative with the view that its implementation would have a positive impact on loan repayments during these notoriously bad repayment months. The significant reduction in December drop offs (TY versus LY) suggests that the customer value proposition is relevant and that the initiative needs more time to prove itself.
**Conclusion**

The paper goes some way towards showing that, despite evidence to suggest that the customers’ outlook is improving post-recession, along with all the measures that this MFI was implementing; there is still huge reluctance on the part of customers to deliver on their financial commitments and that marketing has not yet proven itself as being a significant contributor in the role of inducing commitment to ongoing loan repayments. In terms of the future on issues around arrears and the repayment of loans to MFI’s, there is some literature on how scorecard data could have ‘some predictive power….can flag high-risk cases’ (Schreiner 2004), this information is critical in ensuring that the risks of non-payment are reduced upfront. Ongoing monitoring of loan performance has also been highlighted as an important driver for loan repayment. Further literature exists regarding the performance measures and mechanisms that could be adopted to assist in payment performance; however, most focuses on the “stick approach” with very little emphasis being given to the possibilities of the “carrot approach”.

The impact of offering relevant incentives for the ongoing repayment of loans has not, as yet, been proven at an individual lending level and poses a rather interesting question, as to whether the impacts of targeted and relevant incentivisation would be greater, not just in regard to loan repayments but also in the area of social upliftment, if applied at a group lending level. As with all researched initiatives, many questions persist as to whether these findings will hold in other environments, in other cultures and with other lenders. The implications for practitioner’s intent on using relevant incentive marketing initiatives to encourage ongoing customer loan repayment may yet prove to be significant and as such requires further investigation.
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ENTREPRENEURIAL INTENTIONS AT UNIVERSIDAD ICESI

Rodrigo Varela V., Ph.D.¹

Ana Carolina Martinez²

Alba Tatiana Peña³

ABSTRACT

In this article, the Colombian’s results of a cross cultural research in Entrepreneurial Intentions oriented by Gasse and Tremblay, which did cover Canada, France, Tunisia and Colombia are presented and analyzed. A set at perceptions, values, attitudes, were evaluated in the undergraduate student that were taken Entrepreneurship related courses at the Universidad ICESI.

The results are used to evaluate their behavior and performances in relation to the entrepreneurial process and from there some very important ideas are derivate about the educational process that the Universidad ICESI has been implementing.

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1. Introduction

Since 1985 the Center for Entrepreneurship Development of the University Icesi has been implementing entrepreneurial education in different programs: for students at the undergraduate and graduate level; for university professors, secondary teachers, primary teachers; for professionals with several years of experience; for communities with different levels of education; for students from other universities for high school students; for ethnic groups and for groups of women entrepreneurs, among others.

Throughout these years, the Center has been reforming the educational model and has structured an entrepreneurial education model based on entrepreneurship competences developed from: global knowledge, its own experience and research about the entrepreneurial alumni of the Universidad Icesi and of many other Colombian entrepreneurs.

However, in order to increase the understanding of the Colombian population in general and of the student population at the University Icesi in particular, more research is needed to give basis on the one hand, to improve educational processes and on the other to have specific measurements on certain variables that will allow to compare the Colombian results with the results of other countries. That is why the CDEE-ICESI is actively involved in Global Entrepreneurship Monitor research that in 2009 did cover 54 countries under a unified methodology, and also is participating in the research "Entrepreneurial Intention: a cross-cultural study of University Students in four countries", oriented at Laval university by Gasse and Tremblay.
This article presents the results obtained with students of the University Icesi and in a subsequent article we will present the comparison with students in Canada, Tunisia and France. The basic idea of this research is to extend it to other groups: graduate students at Icesi, other groups of Colombian university and other university groups in Latin America, so that we can make better comparisons between our countries and universities and also generate new educational activities to improve entrepreneurial education in Latin America.

2. Basic ideas

The GEM model (GERA, 2009) stratifies the entrepreneurial process in four very distinct sections as shown in Figure No. 1

![Figure No. 1 - MODELO GEM](image)

Potential entrepreneur is someone who has not yet started his/her company, but is willing to do it. At this stage it is important to review their attitudes, particularly its intention to start the company, which is very much defined by: their perceptions about the existence of business opportunities, their personal ability to carry out it, their motivation to undertake the business process, their personal and professional aspirations, their fear of failure, the acceptance that the society gives to the entrepreneurial activity.
Varela (2008), complementing the ideas proposed by Albert Shapiro, considered that the entrepreneurial process that has to happen to transform a non-entrepreneur in an entrepreneur has six stages which are presented in Table No. 1.

**Table No. 1 - Entrepreneurial Process Stages**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivacional</td>
<td>Taste willingness</td>
</tr>
<tr>
<td>Situational</td>
<td>Business opportunity</td>
</tr>
<tr>
<td>Decision</td>
<td>Decision to go ahead</td>
</tr>
<tr>
<td>Analytical</td>
<td>Business Plan</td>
</tr>
<tr>
<td>Economic</td>
<td>Resource management</td>
</tr>
<tr>
<td>Operative</td>
<td>Operational management</td>
</tr>
</tbody>
</table>

Obviously one of the big questions that come up, especially for the population receiving entrepreneurial education is what the level of attrition at the various stages is. It is known empirically that "many people" want to have their own company and “several” did not get to have it at all.

It is not possible to have an enterprise, and therefore be an entrepreneur, if he (she) does not ever had the desire to be one, so the "Taste" or "Intent" or "Planned behavior and reasoned action" are necessary but not sufficient conditions to achieve the dream and the entrepreneurial vision proposed by Filion (1991).

Gasse and Tremblay made a detailed research about studies that have been focused on the "Entrepreneurial Intention" of college students (Audet, 2004; Boissin, Emin 2006; Kolvereid, 1996; Tkach, Kolvereid 1999, Filion, L'Heureux, Kadji - Youleua, Bellavence, 2002). Also reviewed the theory of reasoned action and planned behavior of Ajzen (1991)
and studies based on it (Shapero, Sokol, 1982; Davidsson, 1995b, Krueger 1993, Krueger and Carsrud, 1994, Krueger, Reilly and Carsrud, 2000; Reitan, 1996)....

Shapiro and Sokol (1982) clearly showed that becoming an entrepreneur requires a change in life style and there are two basic perceptions to define the change on life style: the perception of desirability and the perception of feasibility. Both are affected by the culture that has the potential entrepreneur, or in other term their values, beliefs, attitudes, skills, abilities, knowledge, ways of acting, etc. (We call them in the Icesi’s entrepreneurial educational model, the Entrepreneurial Competences).

With all these basic elements, Gasse and Tremblay, developed a conceptual model, which enrich Shapiro’s is one, keeping the idea that the business process is a multivariable process affected by "Desirability" and "Feasibility", but adding a third element that they called "Creation", which relates to the accumulation of resources that allow the entrepreneur to transform a dream in a real and operating enterprise. Table No. 2 integrates Tremblay and Gasse conceptual model with Varela’s model.

Figure No. 2 presents Gasse Tremblay’s Model (2009), which indicates the complexity of the interactions between the variables and the difficulty that exists in a formal educational process to meet for each student and for each situation all these variables. Tremblay and Gasse clearly indicate that this model is designed to facilitate the understanding of the problem and not to predict entrepreneurial actions.

Figure No. 2 Gasse-Tremblay Model
Varela, (2008), presents 21 elements or component of the Entrepreneurial Spirit, which largely coincide with those Gasse Tremblay proposed as elements; and on the other side the 13 entrepreneurial competences of Varela and Bedoya (2006), also agree with many of the elements of Gasse – Tremblay.

Table No 2 - Entrepreneurial Process Stage’s

<table>
<thead>
<tr>
<th></th>
<th>VARELA</th>
<th>GASSE-TREMBLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational stage</td>
<td>Taste - willingness</td>
<td>Desirability</td>
</tr>
<tr>
<td>Situational stage</td>
<td>Opportunity</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Decision stage</td>
<td>Decision</td>
<td></td>
</tr>
<tr>
<td>Analytical stage</td>
<td>Business plan</td>
<td></td>
</tr>
<tr>
<td>Economic stage</td>
<td>Resources management</td>
<td></td>
</tr>
<tr>
<td>Operational stage</td>
<td>Business management</td>
<td></td>
</tr>
</tbody>
</table>

Gibbs Dyer. (1994) developed an interesting model on entrepreneurial careers, and identifying four basic categories: career selection, career socialization, career orientation and career advancement. Varela and Bedoya (2006), adjusted Dyer Gibbs model and formulated a set of specific variables, within that model, in which there are several variables that indicate the role of the cultural development experiences, in the personal entrepreneurial process, that the potential entrepreneur has to follow.

3. Research Design

Gasse and Tremblay, based on their model and all the bibliographical research, described in the previous section, developed a questionnaire to measure in university students basic ideas on: Entrepreneurship and on perceptions about the desirability and the feasibility of the entrepreneurial event, with the idea that through them it is possible to measure the intention of students to behave entrepreneurial.

The questionnaire was translated into Spanish in the CDEE-Icesi, making some adjustments that were considered necessary to the application environment and also to
measure some special aspects which were considered important for the Universidad Icesi’s educational process.

The questionnaire was applied to students who were taking any one of the following courses: Entrepreneurship, Business Opportunity, Business Plan, Business Plan for Technology Based Enterprises, in the first semester 2009. These students are generally between the sixth and the ninth semester in their various academic programs, and all of them, with the exception of Business Administration students, were taking their first required course in Entrepreneurship. In the case of Business Administration, and Business Opportunity is the fourth course in the sequence Business Plan is the fifth course in the entrepreneurship sequence. The vast majority of students are day students, whose main function is the university life, whereas students in the Business Administration night program are full time employees.

The answer to the questionnaire was voluntary. From a total of 212 students enrolled in these courses (108 women and 104 men) a total of 121 students (64 women and 57 men) filled the questionnaire completely. The questionnaire contains questions specifically aimed at:

• Demographic aspects: age, gender, program, level of progress in the curriculum, professional experience, business background and existence of entrepreneur in the family.

• Entrepreneurship: in terms of how they understand and measure it; where they consider it could be developed; the support the University gives them; the social stimuli, etc.

• Enterprise features: in terms of characteristics, attitudes, motivations, values, beliefs.
• Intentions to create new enterprises in the short, medium and long term. In the Colombian survey it was included the option "Never", because it was considered very important to measure the number of students that does not consider the option of creating an enterprise as part of their professional action
• Entrepreneurial Experience: To identify actions related to the creation of enterprises at any stage during their life.
• Desirability in terms of their careers development: type of work, risk orientations, desired social and professional status.
• Feasibility in terms of the factors making feasible to go ahead with the business.

4. Results

4.1 Demographic aspects

Table No. 3 presents the demographic aspects. The data on age, gender, program, semester and year of graduation are data that simply characterize the sample. The gender distribution is fairly representative of the overall composition in these programs at these levels of development.

It’s important to observe that 81.6% of students have had work experience, mostly part-time. There should also be noted that 59.5% of the students mentioned that in their immediate family there are entrepreneurs, and this should reinforce the commitment of the University ICESI to support entrepreneurial education and in providing training in management of family businesses, because all these young people will end up attached to those family enterprises.
4.2 Beliefs and perceptions

One of the basic aspects of the research was to learn how students perceive certain concepts and phrases used in the academic world. Table # 4 presents the students' understanding about the concept of Entrepreneurship. This was a multiple response question and hence the sum of the percentages exceeds 100%.

<table>
<thead>
<tr>
<th>Table No. 3 - Demographic Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>&lt; 21 years old</td>
</tr>
<tr>
<td>Between 21 and 24 years old</td>
</tr>
<tr>
<td>&gt; 24 year old</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
</tr>
<tr>
<td>Undergraduate</td>
</tr>
<tr>
<td><strong>Program</strong></td>
</tr>
<tr>
<td>Business Administration (Day)</td>
</tr>
<tr>
<td>Business Administration (Night)</td>
</tr>
<tr>
<td>Systems Engineering</td>
</tr>
<tr>
<td>Telematics Engineering</td>
</tr>
<tr>
<td>Industrial Design/Media Design Interactive</td>
</tr>
<tr>
<td>Economics and International Business</td>
</tr>
<tr>
<td>Industrial Engineering</td>
</tr>
<tr>
<td><strong>Entrepreneurs in the family</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td><strong>Course</strong></td>
</tr>
<tr>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Business Plan</td>
</tr>
<tr>
<td>Business Opportunity</td>
</tr>
<tr>
<td><strong>Work experience</strong></td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes, Temporal or part time job</td>
</tr>
<tr>
<td>Yes, Full time job</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Expected graduation year</strong></td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>2010</td>
</tr>
</tbody>
</table>
These results indicate that in the development of the concepts of Entrepreneurship / Intrapreneurship the university has been able to seed the ideas quite well, but that additional efforts are needed in the area of enterprise development and social entrepreneurs.

**Table No. 4 - Entrepreneurship Awareness**

<table>
<thead>
<tr>
<th>Enterprise creation</th>
<th>67.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch and development of a project or a new activity</td>
<td>48.8%</td>
</tr>
<tr>
<td>Organize and manage your own business</td>
<td>54.5%</td>
</tr>
<tr>
<td>Assume/take risk</td>
<td>28.1%</td>
</tr>
<tr>
<td>Creating a non-profit association or cooperative</td>
<td>9.1%</td>
</tr>
<tr>
<td>Increasing their capital and wealth</td>
<td>14.0%</td>
</tr>
<tr>
<td>Development of a new product or new service</td>
<td>42.1%</td>
</tr>
<tr>
<td>Another</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

As shown by table No. 5 it is clear that the goal of eliminating some myths about the entrepreneurial process has been reached.

In relation to the perception of social support and the encouragement that society provides to the person involved in the creation of new business 19.9% of students believe that the support is in the high and very high levels, 58.7% in the average levels and 21.5% at low and very low levels. This perception is a very positive factor that, undoubtedly, will encourage them to undertake their entrepreneurial careers.
The theme of acceptance of entrepreneur failure by the Colombian society, indicates that only 8.4% believe that society tolerates very high and high failure levels, 37.5% tolerates failure at medium level and 54.2% tolerate failure at low and very low levels. It is necessary to think of ways to alleviate this perception of the Colombian society which is not prepared to accept entrepreneurial failure, which everybody knows that it is a normal part of the entrepreneurial process. This perception is very unfavorable for the entrepreneurial actions.

In relation to the place where they could apply entrepreneurship 89.3% considered the private sector, 77.7% the public sector and 87.6% the non-profit organizations. From these results it’s clear that entrepreneurship in the social sector has been well seeded in the students. It is important to note the high value the students gave to the application of Entrepreneurship in the public sector, which should be required to think of specialized courses in this subject and deeper orientation to the development of civic entrepreneur.

### 4.3 Personal characteristics

Table No. 6 present some attitudinal characteristics and values of the students. The fact that most of the students' responses are positive, clearly indicates that the educational
process (family, social, and civic) has been able to get to them the attitudes and values that are necessary for business creation.

Table No. 7 shows on a Likaert scale ranging from totally agree (Position 1) to strongly disagree (Position 7) the results of self-assessments of students on various aspects of entrepreneurial attitudes.

Table No. 6 - Attitudes and values

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am creative, innovative and open to change</td>
<td>85.0%</td>
<td>14.9%</td>
<td>0</td>
</tr>
<tr>
<td>I appreciate the independence and self-confidence</td>
<td>90.9%</td>
<td>9.1%</td>
<td>0</td>
</tr>
<tr>
<td>I impose difficult and ambitious tasks</td>
<td>68.3%</td>
<td>6.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>I am willing to take some risk to increase the social and professional status</td>
<td>81.8%</td>
<td>3.3%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Through academic activities it’s possible to foster the development of entrepreneurship</td>
<td>95.0%</td>
<td>3.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>I am an entrepreneurial person</td>
<td>78.5%</td>
<td>9.9%</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Again, in all the behaviors that encourage the processes of new business creation there is a strong tendency for students to show their agreement with this behavior, which means that to the system (family, society, academia) intention to develop an entrepreneurial culture would seem to be fulfilling its positive role in this regard.

4.4 Feasibility Conditions For The Creation Of New Business Enterprises
Table No. 8 shows the importance that students assign to the main barriers to the creation of new enterprise. Again, the results show that a positive perception has been created through the training process. None of the traditional barriers is described as real to most people. It is very important to observe the effect that the educational process for developing the ability to generate business opportunities has produced because it has the lowest rating. It is necessary to make additional efforts to provide more financing options to achieve a reduction in the negative perception of this variable.

<table>
<thead>
<tr>
<th>Table N° 7 - Entrepreneurial self evaluation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am constantly on the lookout for new ways to improve my life.</td>
</tr>
<tr>
<td>I feel driven to make a difference in my community, and maybe in the world.</td>
</tr>
<tr>
<td>I tend to let others take the initiative to start new projects.</td>
</tr>
<tr>
<td>Wherever I have been, I have been a powerful force for constructive change</td>
</tr>
<tr>
<td>I enjoy facing and overcoming obstacles to my ideas</td>
</tr>
<tr>
<td>If I see something I don’t like, I fix it.</td>
</tr>
<tr>
<td>No matter what the odds, if I believe in something I will make it happen.</td>
</tr>
<tr>
<td>I love being a champion for my, ideas, even against others opposition.</td>
</tr>
<tr>
<td>I excel at identifying opportunities.</td>
</tr>
<tr>
<td>I am always looking for better ways to do things.</td>
</tr>
<tr>
<td>If I believe in an idea, no obstacle will prevent me from making it happen.</td>
</tr>
<tr>
<td>I love to challenge the status quo</td>
</tr>
<tr>
<td>When I have a problem, I tackle it head-on</td>
</tr>
<tr>
<td>I am great at turning problems into opportunities.</td>
</tr>
<tr>
<td>I can spot a good opportunity long before others can.</td>
</tr>
<tr>
<td>If I see someone in trouble, I help out in any way I can.</td>
</tr>
</tbody>
</table>
In terms of the global economy, students evaluated the factors that influence new business creation process, as indicated in Table No. 9.

Table No. 8 - Barriers Assessment

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of opportunities</td>
<td>9.9%</td>
</tr>
<tr>
<td>Lack of support and assistance</td>
<td>33.9%</td>
</tr>
<tr>
<td>Lack of financial resources</td>
<td>42.1%</td>
</tr>
<tr>
<td>Complex procedures</td>
<td>20.7%</td>
</tr>
<tr>
<td>Economic conditions</td>
<td>28.9%</td>
</tr>
</tbody>
</table>

Again one feels that there is good understanding on the fundamental factors for entrepreneurship development: innovation, access to resources, motivation, education system, personal characteristics, and support system.

Interestingly, to the notion of feasibility, is the fact that 78.4% of students believe that if they need resources to start their new business, their family would be supporting them in the entrepreneurial process. In summary it seems that the notion of feasibility is well grounded in the students.

4.5 Desirability conditions for the creation of new enterprises
In the analysis of the desirability is necessary to associate this concept with the entrepreneurial career plans of the students. It is important to note that 68.6% of students would like to develop their career in a large company, 41.3% in a small business, 6.6% in the public sector and 5% in the non for profit sector. This result shows a strong orientation to the private sector, but also indicates that the effort that has been done in the courses to show the importance and opportunities of the SME sector, have begun to show its positive effect. The low interest of the students with both the public and the social sector is something that worries.

Table No. 10 presents the motivations of students when creating their own enterprise to become self-employed.

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facing a challenge</td>
<td>16.5%</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>76.0%</td>
</tr>
<tr>
<td>Becoming my own boss</td>
<td>42.1%</td>
</tr>
<tr>
<td>Making money</td>
<td>35.5%</td>
</tr>
</tbody>
</table>

The results are quite interesting as it clearly shows the possibility that many of the companies that they will create over their life will be more "opportunity oriented" than other styles (Necessity, hobby, rejection of the system, etc.). These results indicates also that they are looking for personal fulfillment. These results maybe the effect of the emphasis that has been done in the Business Career Plan and in the Vision of an Entrepreneurial Career along the courses.
Table No. 11 shows the effect of work experience in the intention to pursue an entrepreneurial career. It is perceived again that the work experiences have helped them to shape their entrepreneurship career plans, and this should lead to strengthening the educational process designed to find positive and negative factors of employment and entrepreneurial careers.

Table Nº 11 - Experience Effect In Entrepreneurial Intention

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very positive</td>
<td>36.0%</td>
</tr>
<tr>
<td>Positive</td>
<td>37.8%</td>
</tr>
<tr>
<td>Neutral</td>
<td>25.2%</td>
</tr>
<tr>
<td>Negative</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

It can be concluded that the perception of desirability is well grounded in the goals of the Icesi’s students.

4.6 Intention to create a new business

One of the main objectives of this research was to measure the time span in which the students plan to create a new enterprise. Table No. 12 presents the basic results.

Table No 12 - Time for new enterprise creation

<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>YES</th>
<th>I DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>During studies</td>
<td>47.9%</td>
<td>41.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Short term after finishing university</td>
<td>33.0%</td>
<td>49.6%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Long term after finishing university</td>
<td>43.4%</td>
<td>46.9%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Never</td>
<td>94.3%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>
It is interesting to note that only 2.8% of students considered that they will never be involved in the creation of a new business and a very high number of them plan to start their new business relatively quickly. It is expected that with the support of the Start-Upcafe, these intentions will increase and that many students actually create their company during university and / or a few years after their will get their undergraduate degree.

As shown in Table 13, each program has its own specific situation. For example the Business Administration Program (Night), where the people is already full time employee or independent, consider that 64.3% will start new enterprises as they are doing their studies, the highest value in all groups, maybe because they had more experience, more age, more business knowledge. However is the second group in terms of the percentage of students that will never create its own business.

<table>
<thead>
<tr>
<th>Table N° 13 - Times to start a new enterprise for the different programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADD</strong></td>
</tr>
<tr>
<td>During studies</td>
</tr>
<tr>
<td>Short term after</td>
</tr>
<tr>
<td>Long term after</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

**Note:** ADD: Business Administration (Day) ADN: Business Administration (Night) IS: System Engineering, IT: Telematic Engineering, II: Industrial Engineering, ENI: Economy and International Business, DI/DIM: Industrial Design /Interactive Media Design.
The intentions by gender are presented in Table 14. It reconfirms the data from GEM Colombia (2009) that the propensity towards entrepreneurship of men is higher than women. It is interesting that in the range "during my study" the proportion of men is almost twice as women. This result proves again that it is necessary to investigate deeply what is happening with the woman and what is needed to motivate women toward entrepreneurship.

Table No. 14 - Intentionality by gender

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>During studies</td>
<td>54.5%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Short term after</td>
<td>57.7%</td>
<td>41.9%</td>
</tr>
<tr>
<td>Long term after</td>
<td>44.2%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Never</td>
<td>2.1%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

It is important to note that 60.8% of the students have been involved in the process of creating new organization, either within or outside the university during their studies. These processes may have come from their own initiative, or from group projects, or from university organizational activities. The "Competencia Empresarial" which takes place at various levels, is an element that will help all students to live a real business experience while they are students. This process also indicates that the students are living entrepreneurship along it’s the academic process.

4.7 Educational Aspects
Another interesting aspect of this research is to analyze the extent to which learning activities used in the University have influenced the intent and the vision of their entrepreneurial career. Table No. 15 presents the results.

Interestingly, most of the elements of the courses are quite well assessed, in the sense of considering that they had very positive effects. Virtually all elements receive more than 60% of highly favorable reviews except for "opinions of “classmates”, "just exercise", "readings and workshops". The only one who receives more than 10% in the range negative / very negative is "just exercise." These results invite to revise our teaching practices and to devote more effort to those that are actually producing positive effects to the students.

Table No. 15 - Methodological aspects

<table>
<thead>
<tr>
<th></th>
<th>Very Positive</th>
<th>Positive</th>
<th>Neither positive nor negative</th>
<th>Negative</th>
<th>Very Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conferences</td>
<td>24.8%</td>
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<td>Views of a teacher</td>
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<td>35.8%</td>
<td>13.3%</td>
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</tbody>
</table>
5. **Conclusions and Recommendations**

This approach to the perceptions of students on various phases of the business process has allowed deriving some conclusions and recommendations:

1. The possibility of integrating various models that explain the multivariate entrepreneurship process and the entrepreneurial training, not only to better understand the variables and factors, but also to study results of academic processes conducted with university students.

2. The research being conducted in various countries can allow the research to identify differences among various groups, cultural, educational processes, economic and political situations.

3. The questionnaire developed by Gasse and Tremblay, and adjusted by the CDEE, requires improvements in order to clarify certain variables such as: measuring intentionality periods of Entrepreneurship, business and labor history of the student, the training received on the business and entrepreneurship academic areas.

4. It is necessary to continue doing this research with various promotions, so that the effect of adjustments to the curricular and extracurricular activities can be measure.

5. This research should be expanded to more Latin American universities to enrich the knowledge of our students and to better align the programs.

6. One highlight in this study is the high percentage of students whose families have business and this should encourage research into the training processes for the development of entrepreneurial family and the strengthening of programs for Family Business Management.
7. It was very satisfactory to know, that many of the ideas, beliefs, perceptions and values that the University Icesi has sought to build in their students have been accepted by them and that some negative myths about the entrepreneurial process have been reduced.

8. The great paradox of the research was to identify the contradiction in our society, which on one hand stimulates the process of new enterprise creation, but on the other is unwilling to accept entrepreneurial failure.

9. A significant change was found because many students show acceptance of the SME sector not only to implement entrepreneurship, but also to work on it. This learning process should be fortified with curricular and extracurricular activities.

10. Self-evaluation of performance made by the students indicates that the system to develop an entrepreneurial culture, made: by the family, society and academia, is fulfilling the role of strengthening the performance processes that favor entrepreneurship.

11. Perceptions of feasibility and desirability are been achieved with our students.

12. The intention towards the creation of companies is high and only 2.8% think that they will never undertakes the process. This is a great achievement of entrepreneurial education.

13. There are significant differences between men and women in terms of their propensity to start new business. This difference needs to be studied in detail and requires actions aimed to achieving equity.
14. There are teaching practices that are recognized by students as useful for the definition of their entrepreneurial careers. That must be taken into account to improve educational processes.
References


The process of successional transmission in family business revisited through Nonaka and Takeuchi. The case of French SME

Principal Topic and Research Question

Succession is a dynamic stage of firms’ organizational change. Beyond the mere event materialized by the break induced by the departure of a former leader and the arrival of a new one, succession can also be analyzed as a change process. Several researchers attempted to understand and model this process. The first research studies in this field adopted an approach based on the life-cycle concept (Barnes and Hershon, 1976; Holland and Boulton, 1984; Holland and Olivier, 1992; Gersick et al., 1997) in order to build models representing actors’ role playing (Handler, 1989). Their major contribution is the identification of the two main components of the succession process: family and entrepreneurship. They also contributed to shed the light on the double character of succession: management transfer and property transfer (Handler, 1990; Hugron and Dumas, 1993). There seems to be a consensus on the fact that succession is a dynamic process during which the roles of both major actors (the assignor and the acquirer) evolve in an intertwined way (Handler, 1990; Hugron and Dumas, 1993). This process has two main centers of gravity: power (Churchill and Hatten, 1987; Handler, 1990; Hugron, 1993) and property (Ambrose, 1983; Churchill and Hatten, 1987; Dunn, 1999; Morris et al., 1997).
The first research studies about the succession process date from the fifties (Christensen, 1953). Since then, it’s only in 1975 that the first attempts to model this phenomenon was carried out, with Hershon’s works. This author contributed to the existing theory by emphasizing the problems related to each kind of transmission: psychological problems (power transfer), organizational ones (leadership). Today, research studies rather focus on the factors affecting succession (Cadieux, 2007; Venter et al., 2005; Jess et al, 2008), the impact of harmony and continuity (Lambrecht and Lievens, 2008), family orientation (Lumpkin et al, 2008), family emotions (Astrachant and Jaskiewicz, 2008), the role of evolutionary psychology (Nicholson (2008), as well as trust (Miller and Miller, 2006).

Four key stages characterize the succession process (Barnes and Hershon, 1976; Longenecker and Schoen, 1978; Churchill and Hatten, 1987; Handler, 1990; Hugron and Dumas, 1993): initiation, integration, conjoint reign, and withdrawal. The success of this process requires a knowledge transfer from the predecessor to the successor. In this perspective, some works have been pointed out: Distlberg and Sorenson (2009) dealing with the impact of resources and the succession system dynamics, Salvato and Melin (2008) with value creation and social capital in family businesses, Denoble et al. (2007) about the Ressource based view approach of the family business, those of Chirico and Salavato on knowledge integration, and of course Bierly and Daly (2008), Julien (2009), Sutter and Stongh (2009).

This research study is an attempt to redefine the succession transmission process and its different stages from the perspective of Nonaka and Takeuchi (1995) by identifying the resources and notably knowledge as a key variable of the analysis.
Methodology

Twenty semi-directive interviews have been carried out within French familial SMEs whose first transfer has been successful. These interviews mainly dealt with the social, cultural, and economic factors affecting the transmission process. We focused on the exchanges between the predecessor and the successor during the transmission. The content of the interviews has been coded and analyzed with Nvivo 8.

Contributions

This research study lays emphasis on a new definition of the different stages of the succession process in family businesses. Three main stages have been highlighted: pre-transmission, transmission and post-transmission. Revisiting Nonaka and Takeuchi’s model helped understand the specificities of each stage: the first one depends clearly on socialization, the second stage is an iterative process between externalization and combination and the last stage deals mainly with internalization. Two levels of analysis are taken into account during the analysis: the individual level, and the system level of the group. Succession time is also a central variable to this analysis. A process integrating three stages and two levels of analysis is presented as a conclusion.
Innovation Capacity and Developed Innovation Types in Small Enterprises
by Helena Forsman and Hannu Rantanen

This paper focuses on innovation development in small enterprises. It explores what are the factors of innovation capacity that predict the development of radical and incremental innovations in small enterprises. The empirical evidence is based on data gathered through an email questionnaire, which yielded 708 qualified responses from the representatives of Finnish small enterprises with fewer than 50 employees. The findings of this study provide two contributions to academic literature. First, the importance of innovation capacity as predictive factor of innovation development in small enterprises is reported in relation to different innovation types. Second, the results establish that the model consisting of innovation capacity and contextual variables explains reasonably well the variability regarding developed radical innovation types but it does not explain the variability regarding developed incremental innovation types.

Introduction
It has been recognized in many countries that small business is an important contributor to gross domestic product (GDP) and employment. It is therefore logical that serious efforts have to be directed towards improving the competitiveness of small enterprises, innovations acting as one driver of it. Therefore, it is needed to enhance our knowledge on the relationship between innovation capacity and innovation development in the context of small business. This paper aims to contribute to the above challenge by exploring the factors of innovation capacity that have influence on the development of certain types of innovations in small enterprises.

Innovation types developed by small enterprises have been examined in current literature resting on two main typologies. Maybe the most studied typology is the distinction between incremental and radical innovations. Enterprises developing incremental innovations often pursue to enhance processes, make operations more effective, improve the quality and decrease costs (Dewar and Dutton, 1986). Correspondingly, radical innovations are completely new offerings characterized by discontinuity in technology and the market (Garcia and Calantone, 2002). Another common typology is the distinction between product and process innovations (Damanpour and Gopalakrishnan, 2001). Product innovation represents changes in end products while process innovation represents changes in methods and procedures how enterprises are producing products and services (Dibrell et al., 2008). Instead, the distinction between product and service innovations is not clear. Service innovations developed by the enterprises of the service sector are considered to be similar to the product innovations developed by the enterprises of the manufacturing sector. On the other hand, the dividing line between manufacturing and services may be blurry. Today’s customers are increasingly seeking solutions to which manufactured products are accompanied by services and vice versa (cf. McAdam et al. 2004; Miles 2000).

In order to accelerate the development of innovations in enterprises, two interconnected terms emerge from existing literature: innovation capacity and innovation capabilities. Szeto (2000) defines innovation capacity as a continuous improvement of capabilities and resources that an
enterprise possesses to explore and exploit opportunities for developing new innovations. Amit and Schoemaker (1993) distinguish capabilities from resources by defining that resources are the stocks of available factors that are owned by an organization while capabilities refer to the ability of an organization to combine efficiently its resources for achieving its objectives. Thus, capabilities are an intermediate transforming ability between resources and objectives (cf. Dutta et al., 2005).

There are a number of studies in literature that examine developed innovation types and innovation capacity in the context of small business (e.g. Avermaete et al. 2003; de Jong and Marsili, 2006; Forsman, 2009; Hernández-Espallardo and Delgado-Ballester, 2009). However, relatively little work has been published on the relationship between innovation capacity and developed innovation types in the smallest enterprises. The purpose of this paper is to identify the sources of influence that have impact on developed innovation types in small enterprises. This will be done by examining the relationship between innovation capacity and the developed product, service and process/method innovations, divided further into radical and incremental innovations. In addition, the relationship between contextual factors and the types of developed innovations will be examined. The empirical evidence is based on an email questionnaire which yielded 708 qualified responses from the representatives of small enterprises with fewer than 50 employees.

The rest of the paper is structured in the following manner. In the next section the theoretical assumptions and hypotheses are introduced. Subsequently, the methodology is presented followed by the findings. In the final section the findings are discussed and the implications for future research are provided.

**Theoretical Assumptions**

**Contextual factors and innovation development**

In literature some contextual factors have been identified as having an influence on innovation development in enterprises. One common contextual factor is the size of an enterprise. When comparing innovation development between small and large enterprises, small enterprises have been found to be more innovative due to their flexibility, higher ability to adapt and improve, and because they are quick movers in implementing change (e.g. Cohen and Klepper, 1996; White et al., 1988). Correspondingly, poor opportunity identification practices, limited capabilities, difficulties to measure the business impact of development work and difficulties in networking are seen as challenges for small enterprises. (e.g. Forsman, 2009; Hannula and Rantanen, 2000; Scozzi et al., 2005). Despite the above characteristics of small enterprises as innovators, researchers have introduced conflicting results about common innovation types developed by small enterprises. Damanpour and Wischnievsky (2006) found that the generation of radical innovations will be nearest to young and small enterprises while the adoption of innovations and the development of incremental innovations will be the most prevalent in large, established enterprises. de Jong and Marsili (2006) examined innovations in small enterprises with fewer than 100 employees and found that process innovation is more widespread in small enterprises than product innovation. Contrary to this, Avermaete et al. (2003) did not find differences between product and process innovations among the micro and small enterprises of the food industry.

Along with enterprise size, Hernández-Espallardo and Delgado-Ballester (2009) pay attention to the influence of the industrial sector on innovation development. They suggest that the high pressure of competition (cf. Porter 1980) on small enterprises would be a motivator for developing
product innovations. Also Pavitt (1984) highlights that the industrial sector affects innovation development in enterprises. He distinguishes three sectoral patterns based on the sources of technology, the requirements and price sensitivity of users and the possibilities for appropriation. Pavitt (1984) argues that the enterprises of low and medium-technology sectors commonly adapt externally acquired technology and make it function in a new environment while innovation generation is more common to the enterprises of the high-technology sector. This is somehow supported by Kirner et al. (2009) who found that low-technology enterprises perform more weakly as regards product innovations and product-related services, but they are able to innovate their production processes at least as efficiently as medium and high-technology enterprises.

Innovation in the service sector is a younger research field than innovation in the manufacturing sector. Pavitt (1984) classifies service enterprises as a whole into supplier dominated sectors characterized by low-technology intensity. This is in line with Miles (2000) who explains that innovations in the service sector are incremental in nature due to the fact that they are consumed in the point of production. Contrary to this, Miozzo and Soete (2001) suggest to service enterprises a similar taxonomy with the one introduced by Pavitt (1984) to manufacturing enterprises. They identified three main service sectors based on the degree of in-house R&D, capabilities and the utilization of technology. This is supported by de Jong and Marsili (2006) who highlight that common diversity patterns in service enterprises are as broad as in manufacturing enterprises. Finally, Cohen and Klepper (1996) remind us about the commonly observed evolution: when industries mature, enterprises tend to emphasize more incremental and process innovations.

On the premise of the above it is hypothesized regarding contextual variables that:

\[ H1a: \text{ The size of enterprise will be related to innovation development in small enterprises.} \]
\[ H1b: \text{ Industrial sector will be related to innovation development in small enterprises.} \]
\[ H1c: \text{ Knowledge-technology intensity will be related to innovation development in small enterprises.} \]

**Capacity for developing innovations**

Innovation capacity has often been equated with the formal R&D activities of enterprises (Kirner et al., 2009) suggesting that higher inputs into R&D reflect more active innovation development in enterprises. Literature on small business management introduces conflicting results about the relationship between innovation development and formal R&D. It points out that innovations are not necessarily results of formal R&D, but rather results of daily business development, customer collaboration or optimization of processes (Hirsch-Kreinsen, 2008). This view is supported by de Jong and Marsili (2006) who identified that only around one third of small enterprises write down a formal plan for innovation and half of the enterprises reserve a budget for innovation. According to Santamaria et al. (2009), innovation often involves informal R&D activities such as experimentation, learning, evaluation and adaptation of technologies. This could result in difficulties in distinguishing innovation development from other business activities, especially in small enterprises in which the development work is integrated into their daily business (Forsman, 2009). On the contrary, Turner et al. (2009) argue that there are no differences between the percentages of revenues spent on projects reflecting the innovation activities of enterprises. According to them, smaller enterprises seem to undertake smaller projects.
Capabilities have been introduced as the transforming ability between R&D investments and innovation objectives (Amit and Schoemaker, 1993; Dutta et al., 2005). The question, ‘What are the capabilities that predict innovation success?’ has been widely studied in literature resulting in a variety of findings. It is a well-established empirical fact that the accumulation of existing knowledge plays an important role in innovation. With a low level of existing knowledge, an enterprise is not able to internalize and exploit the external knowledge. Absorptive capacity is a commonly used concept to describe the ability of an enterprise to recognize the value of new external knowledge, to assimilate it and to apply it to commercial ends (Cohen and Levinthal, 1990; Zahra and George, 2002). Resting on the concept of absorptive capacity, Branzei and Vertinsky (2006) have described it as a basis of dynamic capabilities for product innovations in small and medium size enterprises. This is supported by Teece et al. (2007), who define that the dynamic capabilities of enterprise consist of sensing and shaping new opportunities, seizing opportunities, and orchestrating and reconfiguring the intangible and tangible assets of the enterprise for maintaining its competitiveness.

In addition to dynamic capabilities, literature provides a number of research results about the capabilities or mixes of them that are needed to develop some particular innovation type. Capabilities needed to generate radical innovations have been studied by several researchers while the capabilities needed for developing incremental innovations have received less attention. Market and customer knowledge has been found to be in a key role for developing radical innovations (e.g. Danneels, 2002). Herrmann et al. (2007) add that transformation capabilities, risk-propensity and customer orientation are essential for the development of innovations which are radical in nature. Generally, researchers have found that the development of radical innovations demands the disruption of existing capabilities or the creation of new capabilities while incremental innovation development requires enhancements of existing capabilities (e.g. Ellonen et al., 2009; Forsman and Annala, 2010). Finally, inter-organizational collaboration and networking have been introduced as important innovation catalysts. Thus, Gruenberg-Bochard and Kreis-Hoyer (2009) stress interaction-oriented capabilities for ensuring success in innovation development. To be able to take advantage of networking, enterprises need to be relationship-oriented. Relationship orientation refers to the proactive creation, development and maintenance of relationships with customers, suppliers and other parties of business (Harker, 1999).

It has been suggested that enterprises should engage in collaborative networks to increase their opportunities for innovation development, resource acquisition and capability creation (Caniëls and Romijn, 2005; Powell et al., 1996). Szeto (2000) argues that innovation capacity can be incrementally or radically increased through participation in activities which trigger the supply of innovation resources in an interactive environment. On the other hand, it has been argued that especially small enterprises which are commonly at the periphery of production chains, have encountered difficulties to gain advantage through networking (Forsman, 2009; Tödtling et al., 2009). What are the benefits of networking for innovation development? Various arguments have been introduced, e.g. opportunities to improve knowledge, access to new markets, lower costs of production and R&D (e.g. Glaister and Buckley, 1996; Karaev et al., 2007). Simonin (1997) classifies the benefits of collaborative business relationships into two categories: tangible and intangible. He mentions additional profits, improved market share and sustained competitive advantage as examples of tangible benefits and the creation of specific skills and competencies as intangible benefits. Developing core competencies reduces the dependence of an enterprise on its
partners, and enables it to leverage knowledge and develop new innovations (e.g. Caniëls and Romijn, 2003; Hamel, 1991; Palakshappa and Gordon, 2007). Smedlund (2006) has studied networking benefits from the perspective of small business. He classifies the networks of small enterprises on the basis of three forms of collaboration: knowledge creation for developing new innovations, knowledge transfer for learning best practices and knowledge implementation needed for producing products as efficiently as possible.

On the basis of the above it can be hypothesized that variables of innovation capacity would influence on the development of innovations, all types of them. Hence:

\[ H2a: \text{ Innovation capabilities will be related to the developed innovations in small enterprises} \]
\[ H2b: \text{ Networking benefits will be related to the developed innovations in small enterprises} \]
\[ H2c: \text{ RD investments will be related to the developed innovations in small enterprises} \]

Finally, it is assumed that contextual factors, variables of innovation capacity and their interactions as a whole model predict the developed innovation types in small enterprises. This assumption leads to the fifth hypothesis:

\[ H3. \text{ The model consisting of the contextual factors, the factors of innovation capacity and their interactions explains the variability regarding the developed innovation types in small enterprises.} \]

**Methodology**

**Research data**

In order to examine innovation capacity and innovation development in small enterprises, an email questionnaire was developed. It yielded 762 responses from the representatives of Finnish small enterprises with fewer than 50 employees. The accuracy was checked and the responses with missing values (22 respondents), the responses with inconsistencies (7 respondents) and the responses with inaccuracies (25 respondents) were removed from the data. The final response rate was 13.0 percent. As Table 1 demonstrates, 43.5 percent of the respondents are representatives of the manufacturing enterprises and 56.5 percent of them are from the services enterprises. This ratio is similar to the actual figures of the Finnish economy (Business Register of Statistics Finland, 2008). It has been earlier explored that innovation patterns in service and manufacturing enterprises are similar (e.g. de Jong and Marsili 2006) while there are differences within these sectors (Pavitt, 1984). For this reason, the industrial sub-sector characterizing the knowledge and technology intensity of an enterprise is a contextual variable.

As regards the distribution by the size of enterprise, the data is skewed towards the larger size categories compared with the actual figures of the economy. According to the Business Register of Statistics Finland (2008), the share of the enterprises with fewer than ten employees is almost 90 percent of all the enterprises having fewer than 50 employees, and the size distributions are similar in the service and manufacturing industries. In this data, the share of the smallest enterprises is 43.8 percent. For this reason, also the influence of the size of the enterprise will be examined as a
contextual variable. Nevertheless, the departure from the real size distribution should be noted when interpreting the results.

**Measures**

*Contextual variables.* As suggested in the literature review, the size of the enterprise, the industrial sector and the degree of knowledge and technology intensity of the industrial sector are used as contextual variables. The size of the enterprise is identified based on the number of people working for it. The two size categories used in the analyses are: 0= micro enterprises with fewer than 10 employees and 1= small enterprises having 10 to 49 employees. Also the sector of the enterprise is based on dichotomy variable: 0= manufacturing enterprise and 1= service enterprise. The knowledge-technology intensity of the industrial sector has been identified following the taxonomy introduced by Pavitt (1984). The manufacturing enterprises have been grouped into three categories: 1= supplier dominated sectors (SD) characterized by relatively low knowledge-tech intensity, 2= scale intensive sectors (SI) representing medium knowledge-tech intensity and 3= specialized suppliers (SS) and science based sectors (SB) characterized by high knowledge-tech intensity.

Miozzo and Soete (2001) have modified an application from the Pavitt’s (1984) taxonomy to the service industries which is used in this study as a basis for grouping service enterprises into three categories: 1= supplier dominated sectors (SDS) characterized by low knowledge-tech intensity, 2= the sectors of scale intensive physical networks (PN) representing medium knowledge-tech intensity and 3= the sectors of scale intensive information networks (IN) and specialized supplier sectors (SSS) characterized by high knowledge-tech intensity. The coding principles follow the classification used by Castaldi (2009). Due to the small number of responses from the enterprises of the sectors of SB (12 responses) and IN (20 responses), these enterprises have been combined with SS in the manufacturing sectors and with SSS in the service sectors.

Table 1 introduces the respondents grouped into manufacturing and service enterprises and further into six sub-sectors characterized by low, medium or high knowledge-technology intensity.

<table>
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<th>Total</th>
<th>Manufacturing sectors</th>
<th>Service sectors</th>
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<tr>
<td></td>
<td>SD (Low)</td>
<td>SI (Medium)</td>
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<td>Size of enterprise</td>
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<td>308</td>
<td>165</td>
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Note: " Size by the number of people working for the enterprise, b Knowledge-technology intensity of the sector

**Perceived innovation capabilities.** The perceived degree of innovation capabilities is examined based on 16 questions from which factor analyses using principal component approach with varimax rotation identified five capability factors: entrepreneurial capabilities, knowledge exploitation, networking capabilities, risk management, and finally, customer and market knowledge. These factors account for 59.4 percent of the total variance. The Kaiser-Meyer-Olkin measure of sampling adequacy is .849, exceeding the recommended value of .60 (Jokivuori and
Hietala, 2007). The internal consistency was measured with Cronbach’s Alpha giving results ranging from .64 to .73 being above the critical limit of 0.6 (Jokivuori and Hietala, 2007).

Benefits through networking. External input into innovation development through networking is studied based on eight questions. The respondents assessed what impact networking has had on their business. The responses are graded by one (1) indicating benefits from networking and by zero (0) indicating no benefits related to the item in question. The factor analysis using principal component approach with varimax rotation reveals the presence of three factors: benefits through collaboration for innovation development, benefits through collaboration for improving customer performance and benefits through effectiveness and improved supply chain management. These factors account for 67.8 percent of the total variance. The Kaiser-Meyer-Olkin measure of sampling adequacy is .832 exceeding the recommended value of .60 (Jokivuori and Hietala, 2007). The internal consistency was measured with Cronbach’s Alpha giving results ranging from .71 to .72. The values for all three factors are above the critical limit of 0.6 (Jokivuori and Hietala, 2007).

RD Investments. The rate of R&D investments was reported by respondents in terms of the percentage of sales invested in development activities. The distribution of the percentages of R&D investments supports the findings that innovations are not necessarily results of formal R&D (Hirsch-Kreinsen, 2008; Forsman 2008). The preliminary review of the data indicated that 19.5 percent of the service enterprises and 12.0 percent of the manufacturing enterprises could not determine the rate of R&D investments in their enterprises. The responses were coded to a dummy variable with two categories: low investors and high investors. The first category (0) consists of those who could not estimate the rate of R&D investments and those who had estimated that their enterprises had invested less than three percent of sales in R&D activities. Correspondingly, the second category (1) consists of respondents whose enterprises had invested at least three percent of their sales in R&D.

Dependent variables. The dependent variables of this study are developed innovation types in enterprises. The items are generated from the question asking to separate what types of innovations have been developed in the respondents’ enterprises during the past four years. In this study, the dependent variables consist of six innovation types: radical products, radical services, radical processes/methods, incremental products, incremental services and incremental processes/methods. It was emphasized that innovation development had had to become so advanced that innovation output had been exploited in business. The definitions were provided in the questionnaire. A radical innovation was defined as a product, service or process/method which differs dramatically from the competitors’ ones while an incremental innovation was defined as an improvement to an existing product or service.

Those responding “yes” to a particular innovation type are coded as one (1) and those responding “no” are coded as zero (0). The logistic regression analyses have been carried out by comparing innovators to non-innovators. Non-innovators are enterprises which have not developed any innovation types during the past four years.
Analysis

The correlation analysis was conducted to determine the degree of multicollinearity among the independent variables. The results in Table 2 show relatively low correlation coefficients between capability dimensions. All of them are less than .70 which is a limit suggested by Tabachnic and Fidell (2001, p. 84) and therefore the variables do not give an indication of a multicollinearity problem.

The potential for non-response bias could be assessed by comparing the means of the responses in the last quartile to those responses in the first three (Armstrong and Overton, 1977). It is assumed that the responses of the last quartile are the most similar to those of the non-respondents. The comparisons of the means of all the variables used in this study revealed no significant differences.

Since the research model of this study makes use of six dependent dichotomy variables and 12 independent categorial or interval variables, logistic regression analysis, which is less stringent in terms of normality assumptions, was considered to be a suitable statistical technique for analyzing such mixed data sets (Tansey et al., 1996). In each logistic regression analysis the focus is on: a) the goodness of fit indicating how well the model with its predictors performs, b) the parameter estimates to explore the relationship between independent and dependent variables, and c) the classification table indicating how well the model predicts the correct categories, i.e. innovators and non-innovators. The data has been analyzed in six categories according to the developed innovation types: 1) Innovators of radical products versus non-innovators, 2) innovators of radical

<table>
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<td>3 Knowledge-tech intensity</td>
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<td>Capability dimensions</td>
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<td>.165</td>
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<td>.024</td>
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<td>.101</td>
<td>.387</td>
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<td>.099</td>
<td>.113</td>
<td>.072</td>
<td>.378</td>
<td>.231</td>
<td>.109</td>
<td>.476</td>
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<td>3 Radical processes/methods</td>
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<td>.069</td>
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<td>.349</td>
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<td>.102</td>
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<td>.012</td>
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<td>.082</td>
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<td>.182</td>
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<td>.181</td>
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Note: *p ≤ .05, **p ≤ .01
services versus non-innovators, 3) innovators of radical processes/methods versus non-innovators, 
4) Innovators of incremental products versus non-innovators, 5) innovators of incremental services 
versus non-innovators, and finally 6) innovators of incremental processes/methods versus non- 
innovators. The number of innovators varies between 136 and 394 depending on the innovation 
type while the number of non-innovators, i.e. enterprises that have not developed any types of 
innovations, is 87. Table 5 exhibits the results for the categories of 1 – 3 (radical innovators versus 
non-innovators) and Table 6 introduces the results for the categories of 4 – 6 (incremental 
innovators versus non-innovators). The hypotheses of this study are rejected if the significance 
value is above .05 (p>0.05).

Results

Hypotheses H1 predicted that contextual variables would influence the development of 
innovations in small enterprises. This was tested using Logistic regression Model 1, which 
contains three contextual variables: size of enterprise (H1a), industry divided to manufacturing and 
service sectors (H1b) and the knowledge-technology intensity of sector (H1c).

Overall, the model was rejected (p>.05) for predicting the development of incremental 
innovation types. For predicting the development of radical innovation types, the model was 
significant (p<.05) but its usefulness is low. Nagelkerke R² indicates that only 5.0 - 7.3 percent 
of the variability is explained by this set of variables. However, there are some contextual variables 
that contribute significantly to the predictive ability of the model. The coefficients for the size of 
enterprise were significant (p<.05) with incremental product and process/methods innovations and 
with radical service innovations. It seems that radical service innovations and incremental product 
and process/method innovations are more common to small enterprises than to micro enterprises. 
Instead, the results suggest that the industrial sector is not a predictor for developed innovation 
types. Finally, the coefficients for the knowledge-technology intensity were significant with radical 
product and process/method innovations and with incremental service innovations. This indicates 
that the enterprises characterized by high or medium knowledge-technology intensity will more 
likely to create radical product and process/method innovations than the enterprises characterized 
by low knowledge-technology intensity (Table 3). Further, the enterprises characterized by 
medium knowledge-technology intensity seem to create more often service innovations than the 
enterprises characterized by low knowledge-technology intensity (Table 4).

Hypothesis H2a asserted that innovation capabilities would have influence on developed 
innovation types in small enterprises. This was examined by Model 2 which consists of five 
capability variables. Regarding radical innovation types, the explanatory power of this model is 
much higher than it was in Model 1. Nagelkerke R² indicates that capability variables explain 31.3 
- 35.5 percent of the variability regarding radical innovation types. Correspondingly, with 
incremental innovation types only 6.6 - 10.1 percent of the variability is explained by the 
capability factors. The results suggest that entrepreneurial capabilities, risk management 
capabilities, and market and customer knowledge are important as predictor variables. As Tables 
3 and 4 indicate, the coefficients for entrepreneurial capabilities and for market and customer 
knowledge are significant regarding all innovation types while the coefficients for risk 
management capabilities are significant regarding all radical innovation types. In addition, the 
coefficient for knowledge exploitation is significant with radical process/method innovations and 
the coefficients for networking capabilities are significant with radical product innovations.
Table 3
Logistic regression model with all potential variables between radical innovators and non-innovators

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
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<td>service (N=228)</td>
<td>process/ method (N=223)</td>
<td>product (N=266)</td>
<td>service (N=228)</td>
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<td>.125</td>
<td>.073</td>
<td>.021</td>
<td>.819***</td>
<td>.581***</td>
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<td><strong>Contextual variables</strong></td>
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<td></td>
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<tr>
<td>Size (Micro/Small)</td>
<td>.298</td>
<td>.683*</td>
<td>.555</td>
<td>.357</td>
<td>.666</td>
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<td>Industry (Manufact./Service)</td>
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<td>.632</td>
<td>-4.88</td>
<td>.536</td>
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<td>Know-tech. intensity</td>
<td>*</td>
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<tr>
<td>Medium</td>
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<td>-.613</td>
<td>.898*</td>
<td>.536</td>
<td>-1.10</td>
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<tr>
<td>High</td>
<td>.835**</td>
<td>.135</td>
<td>.705*</td>
<td>.536</td>
<td>-1.10</td>
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<td><strong>Capability dimensions</strong></td>
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<td>Entrepreneurial capabilities</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.011***</td>
<td>1.061***</td>
</tr>
<tr>
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<td>.059</td>
<td>.068</td>
<td>.308*</td>
<td>.094</td>
<td>.119</td>
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<td>Market &amp; customer knowledge</td>
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<td>.582*</td>
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<td>.549***</td>
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<td><strong>Networking benefits</strong></td>
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<td>Development collaboration</td>
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<td>.738***</td>
<td>.703***</td>
<td>.487*</td>
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<td>.011</td>
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<td>2.410***</td>
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<td>2.628***</td>
<td>1.906***</td>
<td>1.718***</td>
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<td>R&amp;D* NET</td>
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<td>-.627</td>
<td>-.047</td>
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<td>.676</td>
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<td>Significance</td>
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<td>42.5%</td>
<td>4.6%</td>
<td>64.4%</td>
<td>74.7%</td>
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<tr>
<td>Obs. pred NO</td>
<td>.00%</td>
<td>42.5%</td>
<td>4.6%</td>
<td>64.4%</td>
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<tr>
<td>Obs. pred YES</td>
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<td>75.2%</td>
<td>93.4%</td>
<td>81.0%</td>
<td>71.6%</td>
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<td>Total</td>
<td>67.3%</td>
<td>62.7%</td>
<td>58.7%</td>
<td>75.6%</td>
<td>72.8%</td>
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Note: Values are parameter estimates, * = p ≤ .05, ** = p ≤ .01, *** = p ≤ .001
### Table 4

Logistic regression model with all potential variables between incremental innovators and non-innovators

<table>
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<tr>
<th>Model</th>
<th>Product (N=423)</th>
<th>Service (N=467)</th>
<th>Process/Method (N=481)</th>
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<tr>
<td><strong>Model 1</strong></td>
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<td></td>
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<tr>
<td><strong>Capability variables</strong></td>
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<td>.612***</td>
<td>.544***</td>
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<td></td>
<td>Benefits through networking</td>
<td>Development collaboration</td>
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<td><strong>Model 2</strong></td>
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<tr>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td>79.4%</td>
<td>81.4%</td>
<td>81.9%</td>
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</table>

**Note**: Values are parameter estimates, * = p ≤ .05, ** = p ≤ .01, *** = p ≤ .001
Finally, the classification tables show that Model 2 consisting of five capability variables classifies reasonably well the radical innovators (71.6% - 81.0%) and non-innovators (64.4% - 74.7%) while the accuracy regarding the incremental innovation types is low. The model cannot classify correctly non-innovators (0.0 %) from incremental innovators (100.0%).

Hypothesis H2b predicted that the benefits acquired through networking would have influence on the development of innovations. This was tested by Model 3 consisting of the three variables of networking benefits. The model explains 14.7 - 21.3 percent of the variability regarding the radical innovation types (Table 3) while it explains 8.9 - 10.0 percent of the variability regarding the incremental types (Table 4). The coefficients for development collaboration are statistically significant with all innovation types and the coefficients for effectiveness are significant with all incremental innovation types. Instead, the coefficients for customer performance are insignificant regarding all innovation types. This indicates that networking benefits acquired through collaborative development increase the probability that the enterprise reports on developed innovations, all types of them while the benefits acquired through improved effectiveness increase the probability that an enterprise reports on developed incremental innovations. The classification tables indicate that Model 3 classifies quite well the radical innovators (75.0% - 81.6%) and non-innovators (47.1% - 60.9%) while it cannot classify correctly non-innovators (0.0 %) from incremental innovators (100.0%).

The last item indicating innovation capacity is R&D investments. It was hypothesized in H2c that R&D investments would have influence on the development of all innovation types. As Tables 3 and 4 demonstrate, Model 4 explains 29.0 - 38.5 percent of the variability regarding radical innovation types and 11.6 - 13.2 percent regarding incremental innovation types. The coefficients for R&D investments are statistically significant related to all innovation types. The enterprises which invest more than 3 percent of their sales in R&D activities will more likely to report on develop innovations, all types of them. This relationship is stronger with radical innovation types than with incremental innovation types. Again, the classification tables indicate that Model 4 predicts reasonably well the radical innovators (67.4% - 75.7%) and non-innovators (81.6%) but it cannot classify correctly non-innovators (0.0 %) from incremental innovators (100.0%).

The last Model 5 consists of contextual variables, all innovation capacity variables, and of the interactions between the different innovation capacity variables. It was hypothesized in H3 that this model explains the variability regarding the developed innovation types in small enterprises. As Table 3 shows, the overall accuracy regarding radical innovation types falls between 80.5% and 83.4%. The results suggest that Model 5 has a good capability for predicting both radical innovators (84.4% - 87.7%) and non-innovators (65.5% - 81.6%). Correspondingly, the overall accuracy of Model 5 is very high regarding incremental innovations (Table 4) but it could predict correctly only incremental innovators (94.6% - 96.1%) but not non-innovators (14.9% - 17.2%). Nagelkerke R² indicates that Model 5 explains 52.0 - 60.8 percent of the variability regarding radical innovation types while it explains only 23.5 - 27.9 percent of the variability regarding incremental innovation types.

When examining the capability variables in Model 5, it can be noticed that entrepreneurial capabilities emerge as a significant variable for developing all types of innovations, both radical and incremental. Risk management capabilities are significant for developing all radical innovation types and market and customer knowledge emerges as significant for developing radical product and service innovations as well as for developing incremental process/method innovations. Finally,
knowledge exploitation is a significant variable for developing radical process/method innovations. On the contrary, the coefficients for networking capabilities are insignificant regarding all types of innovations. Nevertheless, the benefits acquired through networking influence innovation development. The coefficients for development collaboration are significant for developing radical product innovations and radical and incremental process/method innovations. In this model, the coefficients for customer performance are significant with radical service innovations and incremental product and process/method innovations. The third variable of networking benefits is effectiveness. The coefficients of it are significant with incremental service innovations.

As was hypothesized, coefficients for R&D investments were significant related to all innovation types. Finally, Model 5 also consists of variables for interactions. As Tables 3 and 4 indicate, there is an agglomeration of significant coefficients for interaction suggesting that interaction effects predict the development of radical service innovations. The coefficients for interactions are not significant regarding other innovation types.

Discussion

The aim of this study was to identify general sources that have influence on innovation development in small enterprises. It explored the relationship between the developed innovation types and innovation capacity in terms of capabilities, benefits acquired through networking and investments in R&D. In addition, it examined the relationship between the types of developed innovations and contextual factors comprising three variables: the size of enterprise, industrial sector and the knowledge-technology intensity of industrial sector.

In general, the results confirm that there are several variables that predict the development of certain types of innovations in small enterprises. As regards the contextual variables, the size of enterprise was found to have influence on the development of radical service innovations and incremental product and process/method innovations. Small enterprises with 10 to 49 employees will be more likely to report on the development of these types of innovations compared with micro enterprises with fewer than 10 employees. Instead, the size does not contribute significantly regarding other types of innovations. These findings give only partial support to Avermaete et al. (2003) who found that there exist no differences between product and process innovations among the micro and small enterprises. Also in this study, the size of enterprise is not a statistically significant predictive variable regarding radical product and process innovations. Instead, it is statistically significant regarding incremental product and process innovations.

Another significant coefficient among the contextual variables was found for knowledge-technology intensity. In line with Pavitt (1984) as well as Miozzo and Soete (2001), the enterprises of the sectors characterized by medium and high knowledge-technology intensity would more likely to introduce radical product and process/method innovations than enterprises characterized by low knowledge-technology intensity. Within incremental innovations, knowledge-technology intensity was significant regarding service innovations. The results suggest that the probability that an enterprise reports about the developed incremental service innovations is higher with the enterprises characterized by medium knowledge-technology intensity than with enterprises characterized by low knowledge-technology intensity.

The major variables of innovation capacity predicting whether an enterprise reports about developed innovations are: investments in R&D, entrepreneurial capabilities, market and customer knowledge and networking benefits through collaborative development activities. The coefficients
of these variables are statistically significant regarding all innovation types. The entrepreneurial capabilities are similar to dynamic capabilities (cf. Branzei and Vertinsky, 2006; Teece et al., 2007), and thus this study supports the arguments which emphasize the importance of dynamic capabilities for maintaining the competitiveness through innovations. Risk management and market and customer knowledge have been considered as important capabilities especially for developing radical innovations (cf. Danneels, 2002; Herrmann et al., 2007). The results of this study confirm that the higher values of risk management capabilities increase the probability that an enterprise reports about developed radical innovation types while the higher values of customer and market knowledge increase the probability that an enterprise reports about both, developed radical and incremental innovations.

Several researchers have emphasized that formal R&D investments not necessarily reflect the innovation activities in small enterprises (e.g. de Jong and Marsili, 2006; Hirsch-Kreinsen, 2008). The results of this study are somehow conflicting with the above arguments. Based on the preliminary results, less than 20 percent of respondents could not point out the percentage of sales that had been invested in R&D. On the other hand, the probability that these enterprises report about innovations is lower regarding all radical and incremental innovation types compared to the high-investors.

It has been recommended to enterprises that they should engage in collaborative networks to increase their opportunities for innovation development and resource acquisition (e.g. Caniëls and Romijn, 2005; Szeto, 2000). These recommendations are in accordance with the findings of this study. The benefits acquired through development collaboration increase the probability that an enterprise reports about the developed innovations, all types of them. The existing literature introduces also cost effectiveness and improved customer performance as advantages of networking (e.g. Glaister and Buckley, 1996; Karaev et al., 2007; Smedlund, 2006). The results of this study suggest that the networking benefits acquired through improved effectiveness increase the probability that an enterprise reports about the development of incremental innovation types while the networking benefits acquired through customer performance is a statistically significant predictive variable for incremental product and process/method innovations.

Finally, the interaction effects regarding different combinations of innovation capacity variables are significant only with radical service innovations. The coefficients are statistically significant for interaction consisting of all five capability dimensions, interaction between R&D investments and capabilities and interaction between capabilities and networking benefits. Table 5 summarizes the variables that contribute significantly (p<.05) to the predictive ability of Models 1 – 5.

In terms of model fit, the omnibus tests of model coefficients are significant related to all Models from 1 to 5, with one exception: Model 1 consisting of contextual factors is not significant regarding incremental innovation types. Nagelkerke $R^2$ values indicate that Model 2 consisting of five capability variables and Model 4 consisting of R&D investments explain between 29.0 – 38.5 percent of the variability regarding developed radical innovation types while these models explain only 6.6 – 13.2 percent of the variability regarding developed incremental innovation types. Model 5 consisting of all potential variables explains 52.0 – 60.8 percent of the variability regarding radical innovation types while it explains only 23.5 – 27.9 percent of the variability with incremental innovation types. These findings are supported by classification tables. Model 5 has a good capability for predicting both radical innovators and non-innovators but it could not correctly predict non-innovators from incremental innovators. These results are in line with studies...
suggesting that radical innovation development demands disruption of new capabilities and in-house R&D (cf. Ellonen et al., 2009; Forsman and Annala, 2010; Pavitt, 1984). Regarding incremental innovation types, the results suggest that significant variables and interactions are missing from the analysis.

Table 7
Summary of statistically significant variables

<table>
<thead>
<tr>
<th></th>
<th>Radical</th>
<th>Incremental</th>
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<tr>
<td></td>
<td>Product</td>
<td>Service</td>
</tr>
<tr>
<td>Contextual variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size (Micro/Small)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Industry (Manufacturing/Service)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Know-tech. intensity</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Capability dimensions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial capabilities</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Knowledge exploitation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Networking capabilities</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Market &amp; customer knowledge</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Risk management capabilities</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Benefits through networking</td>
<td></td>
<td></td>
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<tr>
<td>Development collaboration</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Customer performance</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>RD Investments</td>
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<tr>
<td>Share of R&amp;D</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Interaction</td>
<td></td>
<td></td>
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<tr>
<td>Capability items (CAP)</td>
<td>X</td>
<td></td>
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<tr>
<td>Networking items (NET)</td>
<td></td>
<td></td>
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<tr>
<td>R&amp;D* CAP</td>
<td>X</td>
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<td>R&amp;D* NET</td>
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<tr>
<td>CAP * NET</td>
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<td>CAP * NET* R&amp;D</td>
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</table>

Conclusions
In summary, this study provides two contributions to academic literature. First, the importance of innovation capacity and contextual variables as the predictive factors of innovation development in small enterprises are reported related to six different innovation types. The results mainly support the existing literature but also deepen it by more detailed analysis indicating, what are the factors that have influence on the development of certain types of innovations. Second, the results establish that the model consisting of innovation capacity and contextual variables explains reasonably well the variability regarding radical innovation types developed by small enterprises but it does not explain the variability regarding the developed incremental innovation types.

This study also has some managerial implications. It recommends that small and micro enterprises might consider directing their resources for improving innovation capacity relating to the factors that influence positively those particular innovation types that an enterprise aims to develop. Based on the results of this study, it can be recommended to pay attention to adequate resources invested in R&D, entrepreneurial capabilities and market and customer knowledge and in potential networking opportunities leading to collaborative development activities. These are
statistically significant factors which have influence on the development of all types of innovations in small enterprises.

There are limitations with the current study that provide direction for future research. First, the literature on innovation management and small business development was used to determine the factors that influence innovation development. Nevertheless, it should be acknowledged that innovation development in the context of small business is a multidimensional challenge and there might be other sources of influence which are not captured in this study. Especially, regarding the incremental innovation types, a question emerges from the results: What significant variables and interactions are missing from the analysis? Second, the research data has been provided by single informants from Finland. The reliance on small business owner-managers is consistent with the prior evidence that they possess the most complete and up-to-date information about the innovation development of their enterprises. Further studies may attempt to gather information from multiple respondents and to extend the analysis to other countries.

**Biographical Notes**

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**References**


Banking on Better Service:
Canadian SMEs Rank the Performance of their Bank

For Canadian small and medium-sized businesses (SMEs), obtaining financing and other banking services at affordable rates has never been easy. It has been well documented that the smaller the business, the bigger the challenge (Bruce, 2000). Last year, this challenge was exacerbated with the most severe global financial and economic crisis in decades. While the impacts on the Canadian economy were not as severe as other economies, SMEs in Canada were pushed to their limits in weathering the economic storm that caused banks and other lenders to tighten credit availability.

The purpose of this study is to produce a comprehensive ranking of the Canadian banks and other institutional lenders (hereafter referred to as “banks”) based on a set of performance-based factors. In other words, the study answers the question: how good or bad a job are banks doing in serving the financing and banking needs of their small and mid-sized business clients? The main source of data is a survey conducted in 2009 that received responses from 12,124 SME owners in Canada.

Given the large survey data set, the analysis goes one step farther. It ranks the banks according to the size of the business client according to nine factors. Three categories of businesses were chosen: micro businesses with 0-4 employees; small businesses are those with 5-49 employees; and mid-size defined as 50-499 employees. The main rationale for distinguishing business clients by their size is based on the premise that businesses generally receive different levels of treatment
and service from their bank compared to larger firms (Bruce, 2003). Another reason to focus on the size of the business client is to address the fact that certain banks cater to different clients.

Nine performance-based factors are used to measure the performance of each bank. The factors are grouped into three sub-indicators: Financing, Fees, and Service. The “Financing” indicator assesses how banks are performing in terms of willingness to lend, lending terms, and information requirements for financing. The “Fees” indicator covers factors including credit card merchant fees and service charges while the “Service” indicator shows how each bank is performing with regards to understanding small business, treatment given by the account manager to the business owner, access to full-service branches, and on-line banking.

The results show that some banks do a better job in catering to businesses in the micro or small size category, while other banks’ strongsuit rests in serving larger businesses. The ultimate goal of the study is to provide clear and objective information on how well the banks are serving the Canadian SME sector. The information can be useful for business owners to help determine which bank is the most appropriate for their banking and financial needs. It also sheds light on the issue of credit availability for SMEs. Conversely, it is also an independent source of competitive intelligence for the banks to consider in developing their approach to better serving the SME market. Those banks that embrace these findings will gain a competitive edge; those that do not will miss an opportunity.
Process of Validation of Complex Conceptual Models after Soft Systems
by Joao Vilas-Boas*

A theoretically validated model to position a discussion about Production Planning and Control (PPC) within a rich organisational context was found as the main outcome of the process. Then, ten rival frameworks were described, as representing other systems thinking, to compare the conceptual model, by following the Soft Systems Methodology (SSM). Analysed dimensions concerned the gap, purpose, scope and expected results, research method, validation of results, models and outcomes and, conclusions. An appreciation of other researchers’ work was provided, promoting the improvement of PPC decision-making. In addition, guidance to operationalise stage 4b of SSM was presented. To sum up, science methods might help entrepreneurs to learn more robust processes to deal with complex corporate structuring, and so, to address some determinants of both organizational behaviour and effective management. In this way, corporations may be offered more credible vehicles for both intra- and entrepreneurship, providing safer bridges to jump over boundaries.

Introduction

From Validity to Better Decision-Making across Boundaries

Validity is a research demand that is difficult to assure, especially in messy and complex unstructured situations. In addition, its level of difficulty increases, when qualitative research is added. This paper aims at reporting the specific validation of a conceptual model previously deducted by the author (Silva 2002: 4, 137, 174). This framework positioned the discussion concerning the relevance of Production Planning and Control (PPC) procedures within a rich organisational context after several different worldviews – the Weltanschauungen (Checkland and Poulter 2006: 6).

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The objective was to show that the methods of science could and should help to validate a construct and so, getting a more robust contribution to the knowledge. Therefore, the concept of validity is understood twofold, as follows: i) what findings appear to be about, is what they ‘really’ are about? And, ii) the relationships in findings should also be verified for truth (Robson 1995: 68).

The practical contribution of construct validity under the guidance of stage 4 of the Soft Systems Methodology (SSM) is about getting models that are more defensible than others, with regard to inconsistency, inadequacies, inclusion of the critical components whose absence or inefficiency is crucial to the existence of the perceived problem and, completeness (Checkland 1994: 176). In this case, the development of a credible audit tool was targeted, later on.

To sum up, this paper presented an instance of the use of the validation concept in order to promote the discussion around the subject – development of a model to find relevant PPC procedures – under the umbrella of stage 4b of SSM. It is argued for that the validated model might point out significant and better-defined ways to sort out practitioners problems, improving the quality of decision-making in the studied domain. Consequently, entrepreneurs may learn more robust processes to deal with corporate structuring, and so, to address some determinants of both organizational behaviour and effective management. In this way, corporations may be offered more credible vehicles for both intra- and entrepreneurship, providing safer bridges to jump over boundaries.

**Model Validation against Other Systems Thinking**

*Stage 4b* of Soft Systems Methodology establishes that the developed conceptual model should also be examined for validity in terms of other systems thinking that the researcher finds significant. Thus, ten relevant approaches to the ‘assessment of the PPC systems (PPCS) success’ were purposefully selected for the main test. Moreover, other
authors might be included in the testing process that follows, whenever their remarks were found as relevant contributors.

Later on, these rival models were summarised with regard to the following dimensions: research gap, purpose of the investigation, expected results, research method, results validation, developed model and research outcomes and, main research conclusion. These meaningful categories were found and derived from cross-analysing the chosen approaches as depicted in Table 3 to Table 6 – labelled A… to …J.

Then, the categorised data were cross-checked with the conceptual model developed in previous research (*vide* Silva 2002, for details) and further discussed, in order to promote its validation. The summary of the findings is also depicted in Appendix Table 1 and Table 2.

This paper presents the validation exercise in two sections: research definition and research design. Each section addressed the previously mentioned categories starting by summarising the main findings of the rival frameworks. Then, the conceptual model validation is attempted by discussing its similarities, contrasts and completeness with regard to the rival approaches.

**Summary and Discussion of Research Definition Dimensions**

**Summary of the Gaps (Table 3 to Table 6)**

*Lack of Satisfaction*. The expenditure of a large amount of money (B in Table 3), put together with not truly effective computer-based implementation and operation of Manufacturing Control Systems (MCS) (B) has resulted into increasing dissatisfaction of users with their Computer-Aided Production Management (CAPM) (F). Some have blamed the deficiencies of the commercially available CAPM for the lack of success
(F). To sum up, vendor’s predictions of improvement are rarely achieved in practice (C).

Common Approaches to PPC Assessment. Few efforts of evaluating and selecting PPC packages have been done (H). Absence, informal or wrong measurements of the performance of most of the Manufacturing Planning and Control Systems (MPCS) modules is still usual (J). Most of the methodologies to assess CAPM focus on a comparison with respect to best practice and require data that the company is unlikely to have (C). Thus, there is a requirement for detailed understanding of the relationships between performance measures, contributing variables and associated best practices (J).

Moreover, criticism about insufficiently validated models to conduct the manufacturing strategy process effectively has also been carried out. These models should assure consistency among the decision categories and between manufacturing strategy and environment. Most of the frameworks make explicit a structural, consistency requirement but miss both functional consistency and empirical testing (E). In addition, many MPCS are based on a single philosophy executed by static methods of planning and control that restrict flexibility and responsiveness. Finally, single view modelling techniques were considered inadequate (G).

Holistic and Strategic Needs. There is a need of debate about the CAPM contribution to the overall performance of the company (C) rather than only considering problems associated with traditional financial performance measures (J). Many times, the development of IT, production organisation, production control, production technology and market has been unbalanced (A). Indeed, failure to consider all related factors is common (B). Moreover, the effort with regard to the measurement of effectiveness and efficiency of MPCS is still little, particularly, in relation to the strategic objectives (J).
Contingency and Situational Needs. Some production control systems have not been related to production situations (A). For instance, factors linked to the industrial sector have been ignored (H). In addition, most of the methodologies to assess CAPM ignore different company types and their individual requirements (C). In fact, there is no best PPCS for all instances. The best system for a firm is contingent upon a number of factors particular to that organisation (D). Finally, it is difficult to make the right choice of PPC software that should be applied to a specific manufacturing firm (H). Thus, some researchers have argued that more standardisation of the PPC software would make the choice process easier (H).

Discussion of the Gap (Appendix)

Table 1 and Table 2)

This research agrees with the trend that was found in the surveyed rival views concerning the lack satisfaction with PPC performance as consequence of the approaches undertaken which (i) are not independent from established interests, (ii) promote the comparison with best practice (vide also Hill and Brook 1994) and, (iii) which are missing relationships between performance results and the related causes. However, it is the most committed approach (I) that looks more complete with regard to the selected research design aspects (vide Table 2), despite most of the rival approaches showing relevant evidence of being independent from software vendors.

On the other hand, the research disagrees with the type of relationships – that is cause-effect – that is sometimes addressed either explicitly or implicitly by the other researchers (for example J, H). It also disagrees with the allocation of failure responsibilities to the commercially available computer-aided ‘solutions’ (F), despite, many times, their operational performance not being the best, as studies from important
researchers have argued for, for example, Porter et al. (1996). Little et al. (2000) advanced some causes to explain PPCS failure, which are found more plausible and that are taken into consideration by the developed model in this research. These causes, which are also explored by some of the rival models, concern the need for holistic, strategic, contingent and situational approaches. In addition, the suggested increase of the standardisation of the CAPM systems seems a positive move, in order to get a better match with the needs of the related industrial vertical sub-sectors (H), despite the needed customisation due to the individual PPC requirements both at the company and SBU levels.

Finally, the research highlights the gap concerning integration. This gap was not identified by some of the rival approaches, either explicitly or implicitly. By integration it is meant the relationships of PPC with the other control procedures within the scope of the business (I) and also, with the other design parameters (B, E). Moreover, consistency has to be more than conceptual or structural (E, J). It should address the functional aspects, that is implementation and operation as the proposed research considered.

**Summary of the Objectives and Purpose (Table 3 to Table 6)**

*Auditing Purpose.* There is the need of a checklist to focus on what is required to become more competitive and achieve world class performance (I). Thus, an audit methodology to evaluate an installed CAPM should be designed, developed and tested (C). It should provide a consistent means of assessing progress periodically (I) with regard to both effectiveness and efficiency (C). This methodology should also provide guidance to establish how existing structured techniques and tools can be used in an integrated manner to analyse and design a manufacturing planning and control system (G).
**Conceptual Guidance.** A methodology that helps user companies to specify and select a CAPM system that fits the company present and future needs should be produced (F). It should help to choose or develop PPCS for different production situations (A, B). Thus, a contingency model should be designed to explain differences in the specifications for PPCS across firms (D). This methodology might be involved with the formulation and implementation of manufacturing strategy, *viz.* description, analysis and design of production systems, in light of present and anticipated market demands (E). If PPC software packages are required, the final stage should be the definition of a way for selecting them. Some authors suggest expert system techniques to support this process (H).

**Effective Implementation and Operation.** The methodology should also provide a set of guiding principles to implement appropriate CAPM (F), in order to assist the effective implementation and operation of MPCS (B). It should also improve the MPCS operational performance by linking performance measures, practices and strategic objectives (J).

**Discussion of the Objectives and Purpose (Appendix Table 1 and Table 2)**

This research is also in line with some of the rival views with regard to the need of consistently and systematically developing and testing an audit tool to assess the potential PPC performance (*for example* C, I, J). Thus, the developed model should provide a set of guiding principles (F) to address the current and future conceptual effectiveness of the PPC procedures, within the scope of the structured analysis and design of the manufacturing system. In fact, the developed methodology should be able to provide conceptual guidance for the specification of the PPC needs and also for the
eventual selection of a CAPM commercial application. However, it is not expected to become a checklist for business success (I). In addition, operational efficiency is not directly targeted despite being the legitimate object of other studies (for example I, J). Finally, the effective implementation is linked to other issues than conceptual design as above argued, for example the interdepartmental co-ordination or the objective assessment of the need for individual MCS (B).

Moreover, this research disagrees from the views arguing for expert systems (H) or another form of automated support to decision-making concerning the choice of a software package, especially in the advanced stages of the selection process. However, this could be acceptable for checking basic compatibilities between the production system characteristics and the PPC features in the early stages (vide MacCarthy and Fernandes 2000, for details).

Appendix

Table 1 shows that there is a great research concern with the conceptual effectiveness of PPC and with its related specification of requirements. However, there still is a significant PPC performance mismatch. This might mean that this concern with the research design has not covered all the relevant issues or that it did not cover some issues sufficiently well. A further point is that there might be other significant contributors to the PPC performance.

Summary of the Scope (Table 3 to Table 6)

Even, typical approaches close to best practice – for example the 4th edition of the ABCD checklist – address a broader scope than only MRPII and DRP. This may also include strategic and organisational issues, as follows: strategic planning processes, people/team processes, total quality and continuous improvement processes and, other planning and control processes (I).
Situational and Strategic Scope. Different manufacturing environments using different types of control systems (B) stated in terms of investment in information processing systems and organisational integrativeness are related to firm’s competitive strategy and environment (D). In fact, there is a need to formulate and implement consistent strategy-driven decisions on manufacturing, in order to achieve success in marketplace, *that is* rapidly and reliably design, produce and deliver a wide range of low cost, high quality products (E). Thus, dynamic environment, great pressure, a changing business environment, continuously increasing global competition, growing product customisation and time-based competition markets (G) should also be part of the scope concerns. Thus, the overall assessment of the situation in the company (I) should be considered part of the scope.

Organisational Scope. The functional characteristics of the physical production system – *for example* layout and process flow – do not seem enough to determine production management requirements (H). MPC are made up of factors and their related interactions in the physical, decisional and informational domains (G) that are part of the organisational structuring. Indeed, the critical importance of the infrastructure, of policies, procedures and technology supporting practices has showed up as relevant. In addition, the integration of humans and computers in the production management system also includes social issues in the scope (F).

Functional Scope. Many times, generic MPCS models free from any framework, applicable to a wide range of manufacturing systems are followed (C, J), for the purpose of developing these methodologies. They are not constrained to any specific computer architecture and the studied system does not even need to be computerised (C). These models define generic processes, known as modules most of which applicable to all manufacturing companies, although the way in which they are organised may not match
the functional organisation of the company (J). Some authors believe that any methodology must include a software specification (F).

**Discussion of the Scope (Appendix)**

**Table 1 and Table 2**

The developed conceptual model agrees with several rival views (*for example* B, E, J), with regard to the support to the implementation stage, due to its broad business orientation and strong relationship with the design of the organisational structure. As a consequence, the organisational and inter-personal processes at play during the implementation of the PPC procedures (Newell *et al.* 1991) are also considered relevant to the scope.

In addition, PPC is an integrant part of the overall company performance. In fact, even some traditional views, which used to be predominantly functionalist and so, considerably reductionist (*for example* Dougherty 1981), have broaden the scope to include strategic alignment (*for example* F, G, I). Thus, the choice to position PPC within the organisational and business scopes changes the ‘problem’ nature because it includes the need to deal with people, the integration of humans with computers, a social dimension, policy definition, decision-making, contribution to the competitive advantage, in addition to the strict specification of the system functionality and to the IS/IT issues.

To sum up, some of the rival views, despite implicitly recognising a different problem nature, have carried on sticking to typical hard systems concepts (*for example* I, J) such as the cause-effect relationships, (*for example* J). Some significant differences are that the conceptual model developed and presented in this research is strongly supported on a methodology from a social sciences background, *that is* on the soft
systems methodology. Thus, it takes into consideration most of the richness coming from the scope broadness, assumes relationships but not causal and, relies on a qualitative approach and on a strong theoretical feed-forward mechanism. However, the pursued methodology also accepts the usefulness of a detailed functional specification to complete the developed conceptual model (I, F).

**Summary of the Expected Results (Table 3 to Table 6)**

Expected results are as follows:

- Comparing PPCS performance against established benchmarks (I); the improvement of the MPCS can be critical to the whole organisation performance and a source of competitive advantage (J); it should even motivate people to work in a more effective manner (I);
- Determining parameters affecting MCS choice, implementation and operation (B);
- Discussing which control concepts fit a given production situation; some existing production control concepts are roughly allocated/related to production situations (A);
- Designing a flexible method to set CAPM contribution to company overall performance (C); successful PPCS must consistently reflect a firm’s competitive strategy (D);
- Developing a generic validated model covering the prerequisites of completeness, relevance and operationalisation for manufacturing strategy (E) may simplify the manufacturing system and ease CAPM implementation (F);
- Expanding the role of a checklist as an industry standard for operational performance measurement (I);
- Constructing a[n] [expert] system that gives as results the required PPC software
functions and the structure of the whole software package that these functions belong to (H); develop the methodology to analyse and design an integrated hybrid system of support tools capable of operating in a dynamic environment supported by existing resources (G).

Discussion of the Expected Results (Appendix

Table 1 and Table 2)

The outcomes expected from the designed conceptual model should be consistent with the manufacturing strategy developed for the business, reflect the firm’s competitive strategy, contribute to the overall performance of the company matching a given production situation and so, fitting the determinants of the manufacturing system (for example A, C, D). Thus, the parameters affecting not only PPC design, but also its implementation and operation (Appendix Table 1) are discussed within the scope of organisational structuring (E), as well as the findings concerning the relevance of the PPC procedures. This is expected to be a significant innovative contribution of this research approach, if compared with the rival views (Appendix Table 1).

Neither performance assessment against established benchmarks, nor setting industry standards for operational measurement are expected results (I) from this investigation. Expert systems development to select CAPM packages (H) is also outside the research scope.
Summary and Discussion of Research Design Dimensions

Summary of Research Methods and Validation Actions (Table 3 to Table 6)

Most of the research methods employed in the surveyed investigations – that is seven out of ten – were found based on prescriptive conceptual models mainly based on literature (A, D, E, F, G, H and I). Two of the models were being predominantly developed by exploratory approaches based on case studies (B and J). Finally, the last of the investigated models presented a prescriptive basis smoothed by the inspection of a wide variety of vendor systems (C).

The validation of the research is a more sensitive issue. Six out of the ten investigations did mention case studies as the validation tool (A, B, D, E, G, I). One of the models was validated through verbal presentations given in the four original case studies. Thus, detailed reports from the field studies were analysed and, an overall assessment of the findings was carried out (J). Eighteen valid replies to a questionnaire from a survey were returned with opinions about other of the investigated models (C). Other of the models does not mention any validation action at all (H). Finally, it is expected that the practical use and application of the CAPM workbooks mentioned as outcomes (F) will result into some form of framework validation.

Discussion of Research Methods and Validation Actions (Appendix Table 1 and Table 2)

The structuring of the problem situation approached by this research is based on an exploratory investigation – carried out outside the scope of this work – on both the researcher’s background and interest and, on a literature review. Thus, the conceptual model was established on a predominantly prescriptive basis smoothed by a previous exploratory view. In fact, most of the rival models are of a prescriptive nature (A, C, D,
E, F, G, H, I). So far, in a natural sciences paradigm, this would be the equivalent to a hypothetico-deductive approach. However, a Popperian attempt to disprove the hypotheses based on prediction fed by fresh data is not possible due to both complexity and problem nature. Nevertheless, it is possible to find some misleading semantics (for example Parnaby 1979; Westbrook 1995), such as: ‘to predict the production systems performance unambiguously’ (Draaijer and Boer 1995).

The differentiating option to the majority of the rival models was to strictly follow up a well-established methodology, that is the soft systems methodology. This resulted into the discussion of the initial research question – that is ‘how can successful PPC procedures be chosen?’ – within the scope of the manufacturing systems design taking into consideration all the structure determinants (D), as well as, in choosing business as the research unit of analysis.

In addition, the validation of the rival models was also found an opportunity for significant improvement, especially with regard to the theoretical validation (vide Table 2). In fact, none of the rival models directly mentioned any type of specific theoretical validation. Some of them even missed any kind of empirical validation (for example H, F). The developed model in this research is theoretically and empirically validated by addressing this gap, as follows: (i) by comparison with generic theories and models of management (SSM ‘stage 4a’) (vide Vilas-Boas 2009a) and, now, by comparison with other significant systems thinking (SSM ‘stage 4b’); and, (ii) by running a confirmatory case study to apply and appreciate the usefulness of the developed enquiring tool as sources of debate about change and of learning (Vilas-Boas 2009b).

Finally, it is explicitly assumed that the analyst has carried out an interpretive, subjectivist and political exercise, during both the case study and the theoretical validation. Moreover, the research pursues naturalistic views, assuming both non-
deterministic and non-programmable variables that do not relate by linear cause-effect relationships.

**Broad Outline of the Conclusions of the Investigations (Table 3 to Table 6)**

In general, the developed models were judged positively by their designers, as follows: (i) with some potential that ‘stylised typifications’ should test (A); (ii) useful for objective assessment of the need for individual MCS (B); (iii) satisfactory, because useful results relating to the appropriate behaviour of the installed CAPM could be obtained (C); (iv) positively discriminatory between the system needs of firms within the same industry, facing the same general environment and employing the same process technology (D); (v) useful to pursue the implementation of consistent manufacturing strategies both internal and externally (E); (vi) helpful, once it resulted in a workbook to specify and select the appropriate software, which was supported by a SERC grant (F); (vii) successfully including the features to be employed as a design tool of systems operating in a dynamic environment, because of its positive testing in different environments (G); (viii) valuable to those who plan to buy/develop and implement a PPC package (H); (ix) successfully pointing out the way to the achievement of world class (I); and, (x) successfully resulting into MPCS that are designed to co-ordinate the execution of manufacturing activities to support customer requirements and strategic objectives (J).

**Discussion of the Conclusions of the Investigations (Appendix Table 1 and Table 2)**

The positive evaluation that most of the researchers make of their own models appear, at first sight, to be a matter of opinion not explicitly supported. In fact, even when questionnaires were issued the results were not appreciated after the statistics
rules (C). Moreover, the addressing and explanation of the confirmatory case studies was very humble. It should be mentioned that there might be more information available about the rival approaches but not externally reported or even gathered by this research. Nevertheless, research validation, as such an important issue, should have been detailed mentioned in the papers analysed, some of them reporting seminal work. Thus, the evaluation of the approaches is mostly left to deficient political arguing due to the nature of problem and to a fragile methodological basis.

Moreover, the self-assessment exercises of the rival researches are usually related to their initial purpose. However, some initial claims (vide Appendix Table 1) were mostly forgotten, for example the implementation and the operational aspects concerning the strategic process, in addition to the structural issues; the relationship between PPC and the other control procedures within a holistic and integrated scope; or, the discussion of the role of the IS/IT strategy within the strategic approach. In addition, other initial intentions were softly or incompletely addressed, for example the contingency factors (determinants of organisational structure); or, the validation of the research results.

**Conclusions**

A previously deducted conceptual model (Silva 2002: 4, 137, 174) was purposefully compared with other systems thinking, in order to complete a theoretical validation exercise (Vilas-Boas 2009a). Thus, ten significant rival frameworks were chosen, described and analysed. These approaches were recognised as important as the soft systems one, but they also were found contrastively different.

It is argued that this validation process after the stage 4b of SSM contributed to add sufficiency to the necessary condition for finding relevant PPC procedures, which had
been previously checked in stage 4a (Vilas-Boas 2009a) – finding ‘true’ relationships. As further research, the model usefulness should also be set against real-world activities in other different contexts.

Finally, this exercise was expected to provide a contribution to the practitioner because it appeared to have helped in structuring a complex situation by providing credibility and trustworthiness to the conceptual model through its validation process. The choice of the soft systems thinking methodological paradigm and its operationalisation were relevant, updated and unusual contributions to the design of enquiries concerning situations with significant social and political dimensions (Vilas-Boas 2009c). In fact, there is a growing safety feeling that the proposed model is, now, much closer to what it appeared to be than before this exercise.

**Selected references**


problem”, *Production planning and control*, 11(7) 721-729.


## Appendix

### Table 1

**Comparison of the research definitions of rival approaches**

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Comparison of the research designs of rival approaches

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<td>X</td>
</tr>
<tr>
<td>Consistency between overall business strategy and manufacturing strategy</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Consistency between overall business strategy and IS/IT strategy</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Consistency between the manufacturing strategy and the other functional strategies</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Consistency between IS/IT strategy and the business environment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Consistency between PPC and the other design parameters</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Functional consistency of PPL: support to implementation and operation</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Empirical</td>
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<tr>
<td>Confirmatory case study(ies)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>Survey(s) and/or workbook(s)</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Comparison with best practice</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Interpretive, subjectivist and political synthesis of the analyst</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hermeneutic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
### Table 3
Rival approaches to find relevant PPC procedures (Part I/IV)

<table>
<thead>
<tr>
<th>€</th>
<th>(A) Van Der Linden and Grünwald (1980)</th>
<th>(B) Kochhar and McGarrie (1992)</th>
<th>(C) Sitoh et al. (1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gap</strong></td>
<td>- Unbalanced development of IT, prod. organisation, prod. control, prod. technology and market</td>
<td>- Not truly effective computer-based implementation and operation of MCS</td>
<td>- Need to debate CAPM contribution to the overall performance</td>
</tr>
<tr>
<td></td>
<td>- Production control is not related to production situations</td>
<td>- Expenditure of large amount of money</td>
<td>- Vendors predictions of improved performance are rarely achieved in practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Fail to consider all related factors</td>
<td>- Most of the methodologies to assess CAPM:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Focus on a comparison with respect to best practice</td>
</tr>
<tr>
<td><strong>Objective/ purpose</strong></td>
<td>- To help to choose &amp; develop systems for production control &amp; material management for different prod. situations</td>
<td>- Assist MCS selection, effective implementation &amp; operation</td>
<td>- Require data that the company is unlikely to have</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Ignore different company types &amp; their individual requirements</td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>- Limited to short-term control of the flow of goods, excluding such issues such as capacity planning</td>
<td>- Different manufacturing environments using different types of control systems</td>
<td>- Design, development &amp; test of a audit methodology to evaluate an installed CAPM, i.e., to establish its effectiveness &amp; efficiency</td>
</tr>
<tr>
<td></td>
<td>- Some existing production control concepts are roughly allocated to production situations</td>
<td>- Parameters affecting MCS choice, implementation &amp; operation</td>
<td></td>
</tr>
<tr>
<td><strong>Expected results</strong></td>
<td>- Discuss which control concepts fit given prod. situation</td>
<td>- Parameters affecting MCS choice, implementation &amp; operation</td>
<td>- Wide range of manufacturing systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Not constrained to any specific computer architecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- The assessed system need not to be computerised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Generic CAPM, free from any framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Flexible method designed to establish the CAPM contribution to the overall performance of the company</td>
</tr>
<tr>
<td><strong>Research method</strong></td>
<td>- Prescriptive model</td>
<td>- Background study identifies list of parameters likely to affect choice &amp; prerequisites for success</td>
<td>- Prescriptive &amp; exploratory; developed in collaboration with companies having difficulties with CAPM; inspection of vendor systems</td>
</tr>
<tr>
<td></td>
<td>- Case study in N. V. Philips, but results are not reported or even referred to</td>
<td>- 7 case studies (interviews supported on questionnaire)</td>
<td>- Generic over CAPM</td>
</tr>
<tr>
<td><strong>Validation of results</strong></td>
<td>- Typification of production situations</td>
<td>- Validation of results by field studies</td>
<td>- Three types of validity: content, criterion-related &amp; construct</td>
</tr>
<tr>
<td></td>
<td>(i) Market: product specificity, demand regularity &amp; uncertainty, product life cycle</td>
<td></td>
<td>- No single criterion; operational cost reduction versus planning variance are rivals</td>
</tr>
<tr>
<td></td>
<td>(ii) Technology: product complicity, number of processes per product</td>
<td></td>
<td>- Need of correlation between measures and criteria</td>
</tr>
<tr>
<td></td>
<td>(iii) Production org.: internal co-ordination, diversity, unit convergence, volume, price, added value</td>
<td></td>
<td>- Valid explanations for identified problems</td>
</tr>
<tr>
<td></td>
<td>(iv) Control of a chain of production centres: integration, supplier characteristics</td>
<td></td>
<td>- Success is the contribution to overall sustainable competitiveness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Validation by a survey with18 of responses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 61% found it helpful to understand compet. position</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 40% found it helpful to set CAPM characteristics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 29% found it helpful to set CAPM contribution</td>
</tr>
<tr>
<td><strong>Models and outcomes</strong></td>
<td></td>
<td></td>
<td>- Four stage audit tool</td>
</tr>
<tr>
<td></td>
<td>- Typification of production control concepts</td>
<td>- MCS depend very much on the following issues</td>
<td>(i) Product mix, manufacturing &amp; product characteristics</td>
</tr>
<tr>
<td></td>
<td>(i) Market: product specificity, demand regularity &amp; uncertainty, product life cycle</td>
<td>- Internal considerations: products, manufacturing processes, workforce and systems</td>
<td>(ii) Database, decision support &amp; transaction processing characteristics</td>
</tr>
<tr>
<td></td>
<td>(ii) Technology: product complicity, number of processes per product</td>
<td>- External considerations: market demand</td>
<td>(iii) Competitive measures</td>
</tr>
<tr>
<td></td>
<td>(iii) Production org.: internal co-ordination, diversity, unit convergence, volume, price, added value</td>
<td>- Manufacturing, systems complexity, which requires a MCS need and can be used to assess the MCS requirements</td>
<td>(iv) Establish source of CAPM problems/adequacy</td>
</tr>
<tr>
<td></td>
<td>(iv) Control of a chain of production centres: integration, supplier characteristics</td>
<td>- Uncertainty parameters, which create a MCS need and they may inhibit the effective implementation of MCS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(v) Order generation for both customers &amp; factory: on stock/on order</td>
<td>- Flexibility characteristics, which help to overcome problems introduced by complexity and uncertainty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vi) Capacity allocation and sequence determination: fixed/variable</td>
<td>- Essential prerequisites for success, which are top mgmt. commitment, education and training, discipline, data accuracy and attitude to change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vii) Requirements planning: statistical/deterministic</td>
<td>- Appropriate to effective implementation to follow a MRPII structure to assess the MCS requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(viii) 3-D matrix to make an overall allocation of production control concepts to different production situations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>- The characteristics above identified can be used to create a structured framework for objective assessment of the need for individual MCS</td>
<td></td>
<td>- The proposed framework was found satisfactory</td>
</tr>
<tr>
<td></td>
<td>- For general consideration, stylised typifications give rough indications for practice &amp; illustrate the method</td>
<td></td>
<td>- Useful results relating to the appropriate behaviour of the installed CAPM could be obtained</td>
</tr>
</tbody>
</table>
Table 4
Rival approaches to find relevant PPC procedures (Part II/IV)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective/purpose</td>
<td>- No validated model to conduct the manufacturing strategy process effectively</td>
<td>- Increasing dissatisfaction of users with their CAPM</td>
<td>- To produce a methodology that helps user companies to specify and select a CAPM system that fits the company present and future needs</td>
</tr>
<tr>
<td>Scope</td>
<td>- Existing frameworks are structural pursuing a consistency requirement but missing the functional issue and empirical testing</td>
<td>- Lack of success due to deficiencies with commercially available CAPM</td>
<td>- Set of guiding principles to implement appropriate CAPM</td>
</tr>
<tr>
<td>Expected results</td>
<td>- Formulation &amp; implementation of manual strategy, viz., description, analysis and design of production systems, in light of present and anticipated market demands.</td>
<td>- The critical importance of the infrastructure, policies, procedures and technology as supporting practices showed up as relevant</td>
<td>- The critical importance of the infrastructure, policies, procedures and technology as supporting practices showed up as relevant</td>
</tr>
<tr>
<td>Research method</td>
<td>- Generic validated model covering prerequisites of completeness, relevance and operationalisation for MS' define</td>
<td>- Integration of humans and computers in the production mgmt. system</td>
<td>- Integration of humans and computers in the production mgmt. system</td>
</tr>
<tr>
<td>Validation of results</td>
<td>- Case studies</td>
<td>- CAPM implementation methodology for the electronics sector</td>
<td>- CAPM implementation. can be eased if manual. system is first simplified</td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- Top-down approach integrating strategic business &amp; CAPM requirements</td>
<td>- Needs to check potential of transferability</td>
<td>- In future, the practical use and application of the CAPM workbooks, which provide a step-by-step guide to the specification and selection of the most appropriate CAPM system, may help to the validation of the framework</td>
</tr>
<tr>
<td>Conclusion</td>
<td>- It is possible to discriminate between the system needs of firms within the same industry, facing the same general environment and employing the same process technology. Failure in PPCS is due to the: (i) imposition of technical solutions; (ii) not approaching technical and organ. Simultaneously, PPC professionals must seek ways of dealing with broader variety of problems. Further research into strategy/structure links. Explore other contingent factors.</td>
<td>- The software selection proposed by the methodology is enhanced by a series of guidelines on the split of tasks between the human and the computer elements of the CAPM.</td>
<td>- The methodology focuses initially on the simplification of the overall control system and then on the specification and selection of an appropriate software system.</td>
</tr>
</tbody>
</table>
## Table 5

Rival approaches to find relevant PPC procedures (Part III/IV)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>- Existing MPC are based on a single philosophy which is executed by stage by stage methods of planning and control restrict the flexibility and the responsiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Inadequate single view modelling technique</td>
<td>- Difficult to choose right PPC to apply specific firm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective/ purpose</td>
<td>- Lack of sufficient standardisation of PPC software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Few efforts of evaluating and selecting PPC packages</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Factors linked to the industrial sector are ignored</td>
<td>- Helping managers to find the right answers to: Are we doing the right things? How well are we doing them? Are we on the right track to world-class performance?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope</td>
<td>- Dynamic environment, great pressure, changing business environment, continuously increasing global competition, growing product custom., time-based competitive markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- MPC are made up of factors and related interaction in the physical, decisional and informational domains</td>
<td>- Functional characteristics of the physical production system – e.g., layout and process flow – are not enough to determine production mgmt. requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected results</td>
<td>- The 4th edition of the ABCD checklist addresses strategic planning processes, people/team processes, total quality and continuous improvement processes and, planning and control processes, not only MRPII and DRP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research method</td>
<td>- A method for selecting PPC software packages is presented. This method is based on expert system techniques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Validation of results</td>
<td>- Checklist to focus on what is required to become more competitive and achieve world class performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- Consistent means of assessing progress periodically</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- Overall assessment of the situation in the company</td>
<td></td>
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</tr>
<tr>
<td>- A methodology developed to analyse and design an integrated hybrid system of support tools (MPC) capable of operating in a dynamic environment supported by existing resources</td>
<td></td>
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<tr>
<td>- An expert system has been constructed that gives as inference results the required PPC software functions and the structure of the whole software package that these functions belong to</td>
<td></td>
<td></td>
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<tr>
<td>- A prescriptive model</td>
<td></td>
<td></td>
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<tr>
<td>- Questionnaire to support business diagnosis</td>
<td>- Comparing performance against established benchmarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Expert knowledge concerning production systems and PPC software is gathered and classified</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Benchmarking; sustainable competitive advantage; ongoing formal strategic planning; congruence to strategy; business planning; generation of product costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- People: commitment to excellence; culture; trust; teamwork; employment continuity; educat. &amp; training; work design; congruence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- STRATEGIC PLANNING: commitment to excellence; business strategy; benchmarking; sustainable competitive advantage; ongoing formal strategic planning; congruence to strategy; business planning; generation of product costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- TQC &amp; continuous improvement: commit. to excellence; top mgmt leadership; customer focus &amp; partnerships; waste elimination; routine use of TQC; required resources &amp; facilities; MTO; supplier partnerships; procurement; Kanban; velocity; accounting simplification; TQC &amp; JIT use; teamwork; educat. &amp; training; work design; employ. continuity; company perf.; set/achieve quality goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- NPD processes: commitment to excellence; multi-functional NPD teams; early team involvement; customer requirements; decrease time-to-market; preferred parts, materials &amp; processes; education &amp; training (E&amp;T); integration of NPD &amp; PPC; change control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models and outcomes</td>
<td>- Planning &amp; control processes: commit. to excellence; operations; sales &amp; financial planning, reporting &amp; measurement; what-if; forecasting; sales plans; integrated order entry &amp; promising; MPS; planning &amp; control of mrts, suppliers &amp; capacity; customer service; perform. of sales &amp; production plans, MPS, schedule &amp; supplier delivery; accuracy of BOM, inventory record &amp; routing; E&amp;T, DRP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td>- The ABCD checklist enables the achievement of world class</td>
<td></td>
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<tr>
<td></td>
<td>- The recommended performance improvement process requires</td>
<td></td>
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<tr>
<td></td>
<td>- To assess current status; establish goals and objectives; tailor the checklist to the company’s immediate needs; develop action plans; measure progress; conduct monthly management reviews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td>- The methods can be valuable to those who plan to buy/develop and implement a PPC package. Such decisions are too complex to be faced by quantitative multi-criteria methods or simple guessing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td>- The ERP trend is clearly to follow vertical industry solutions which is the basis of this expert system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. **G** Banerjee et al. (1993)
2. **I** Tatsiopoulos and Mekras (1999)
3. **I** Souza (1993)
Table 6
Rival approaches to find relevant PPC procedures (Part IV/IV)

(J) Davies et al. (1996); Kochhar et al. (1997)

| Gap | Requirement for detailed understanding of the relationships between performance measures, contributing variables and associated best practices
| Problems associated with traditional financial performance measures
| Little measurement of effectiveness & efficiency of MPCS, particularly, in relation to the strategic objectives
| Absence, informal or wrong measurements of the performance of most of the MPCS modules

| Objective/ purpose | To improve operational performance through the MPCS by linking measures of performance, practices and strategic objectives

| Scope | A generic MPCS model is followed. It defines generic processes, known as modules most of which applicable to all manufacturing companies although the way in which they are organised may not match the functional organisation of the company

| Expected results | Improvement of the MPCS. They can be critical to the performance of the whole organisation and a source of competitive advantage

| Research method | Exploratory field studies: identify measures, priorities, actual values, critical issues, causal relationships, data collection difficulties/cost, effect on performance indicators, improvement action assessment, confirm best practices
| Expert knowledge

| Validation of results | Verbal presentations given in the four original case studies
| Analysis of each of the detailed reports from the field studies and, overall assessment of the findings

| Models and outcomes | Indication of the appropriate measures and practices and the full effects, both desirable and undesirable aspects, of taking action on a specific area of performance
| From the organisation’s top level strategic objectives, objectives for each model of the MPCS system is defined, with measures of performance implemented to support these objectives
| Variables and practices affecting these measures are identified, as well as the effects of implementing the practices and manipulating the variables on the desired, and other, measures of performance.
| The relationships between the identified measures of performance, variables and practices provide information on the full effects of taking action intended to improve a specific area of performance

| Conclusion | Strategic objectives can be developed throughout the organisation and focused on the areas that can satisfy them. This has particular importance within MPCS as they are designed to co-ordinate the execution of manufacturing activities to support customer requirements and strategic objectives
| Many MPCS are simply no more than transaction processing systems
| There is little understanding of cause and effect relationships. Further research is required to contribute to the integration of overall and sustainable performance
PROCESS OF VALIDATION OF COMPLEX CONCEPTUAL MODELS AFTER SOFT SYSTEMS

Purpose

This paper concerns a dimension of Corporate Entrepreneurship related to the strategic development of the organisational structure.

Theoretical background

The author has been working in a framework that positions organisational development by considering knowledge from two core schools of thought: the strategists and the structuralists. An extension to this framework was recently proposed by introducing an innovative definition for structure adequateness, as follows:

- «an organisational structure is found adequate if relevant choices for all its design parameters can be met or, at least, argued for.»

This definition also considered that two types of theoretical validation exercises were required, in order to assure the necessary and sufficient conditions for setting the relevance of the design parameters. These two validation exercises, which were performed for one design parameter, followed stages 4a and 4b of a methodology recognised by the scientific community – the Soft Systems Methodology (SSM) (Checkland, 1994). In fact, a credible scientific methodology is a requirement to go away from the doxa domain and to build up knowledge that targets the scientific label.

Paper aim

This paper detailed the process to theoretical validate a conceptual model concerning relevant Production Planning and Control (PPC) procedures, as regards stage 4b of SSM.
**Objectives and research question**

The conceptual model should provide a base for ordered questioning (Checkland, 1994: 178) that will be redefined and presented as a credible audit tool. Then, a research question arose, as follows:

- **How to operationalise** this model, in order to argue for relevant PPC procedures?

**Design/methodology/approach**

Ten rival working frameworks were purposefully selected and described, as representing the other systems thinking, that the researcher outstanding admired. Then, the proposed conceptual model was compared with those ones, according to stage 4b of Soft Systems Methodology.

The dimensions that were analysed were classified into two categories, as follows:

i) The first one concerned the research definition, i.e. gap, purpose, scope and expected outcomes;

ii) The second one concerned the research design, i.e. conceptual model, research methodology and validation of results (both empirical and theoretical).

The validation of the conceptual model should not concern an accept/reject decision making but, instead, it should identify models that are more defensible than others (Checkland, 1994: 173). In fact, after the validation exercise, one could only argue for a conceptual model that should be more defensible than others with regard to inconsistency, inadequacies and completeness. Thus, the conceptual model validation was attempted by discussing its similarities, contrasts and completeness with regard to the rival approaches. Other authors were also included in the testing process that followed, whenever their remarks were found as significant contributors.
Findings

The positive evaluation that most of the researchers made of their own models appeared, to be a matter of opinion not explicitly supported. In fact, even when questionnaires were issued the results were not appreciated after the statistics rules. Moreover, the addressing and explanation of the confirmatory case studies was very humble. Thus, the evaluation of the approaches was mostly left to deficient political arguing due to the nature of problem and to a fragile methodological basis.

Moreover, some initial claims were mostly forgotten, *e.g.* the implementation and the operational aspects concerning the strategic process, while other initial intentions were soften or incompletely addressed, *e.g.* the contingency factors or, the validation of the research results. Research validation, as such an important issue, should have been detailed mentioned in the papers analysed, some of them reporting seminal work.

Relevance/contribution

This exercise was expected to provide a contribution to the practitioner because it appeared to have helped in structuring complex situations by providing credibility to the conceptual model. Thus, it was shown that the methods of science could help to improve the trustworthiness of research findings and so, getting a more robust contribution to the knowledge. In addition, guidance to address the operationalisation of stage 4b of the Soft Systems Methodology (SSM) was provided.

In the future, the model should also be empirically testing for the same design parameter, in order to check the robustness of the proposed mid range theory, as regards its usefulness.
Finally, it was recommended that both theoretical and empirical tests were extended to all design parameters of the organisational structure, in order to set the scopes for their individual relevance and also, to establish their usefulness. This would enable a more trustful overall discussion about the adequateness of organisational structures to pursue strategic business development.

Selected reference

Entrepreneurial opportunities identification processes, an exploratory study of French entrepreneurs from difficult districts

Amine CHELLY

Abstract

Opportunity identification is one of the most important issues in entrepreneurship. Indeed, one can’t speak about entrepreneurship without speaking about opportunities (Shane and Venkataraman, 2000). However, the question of what is an entrepreneurial opportunity and if it is discovered, researched, created, emergent, identified ... is still unresolved. Based on the work of Sarasvathy and al. (2003) on opportunity identification processes, we propose in this paper to analyze the process of identifying entrepreneurial opportunities within three entrepreneurs from deprived areas in the Paris region in France. Our goal is to understand and identify some trends from these entrepreneurs on their way to identify business opportunities and to understand, therefore, the specificity of business opportunities identifying processes

Introduction

Many studies in entrepreneurship (for example: Low, and MacMillan 1988; Stuart, and Abetti 1990) showed that the idea about the existence of differences between entrepreneurs and managers or other economic actors is not verified. Although researchers have not completely agreed on a definition of the term "entrepreneur" and "entrepreneurship" (for example: Bruyat 1993; Verstraete 1999; Gartner 1988), a large majority of them grants to give a prominent place in the field of entrepreneurship to the concept of "opportunity identification" (Ardichvili and al. 2003; Bygrave, and Hofer 1991; Kirzner 1979; Venkataraman 1997; Shane, and Venkataraman 2000). Ardichvili, and al. (2003) argue that opportunity identification is one of the most important skills that successful entrepreneurs must have. According to Gaglio and Katz (2001), "understanding opportunity identification process represents one of the most central questions in the field of entrepreneurship" (p. 95). Shane and Venkataraman (2000) believe that one of the fundamental issues in entrepreneurship research is "why, when and how some individuals and not others discover and exploit opportunities." The question of
“where” and “how” entrepreneurs identify entrepreneurial opportunities remains elusive and continues to be relatively ignored. Despite its theoretical and practical importance while it is the first step in the entrepreneurial process (Baron, and Shane 2005), research regarding opportunity identification remains under developed which is very surprising because without opportunity identification, we can’t talk about entrepreneurship (Shane, and Venkataraman 2000).

After presenting the specificity of the opportunity based-view in entrepreneurship (1), we focus in this paper on entrepreneurial opportunity identification processes within a group of entrepreneurs from some “difficult” districts in the suburbs of Paris, France (2). The goal is to understand and identify some trends from these entrepreneurs on their way to identify entrepreneurial opportunities.

1. The Opportunity Based-View in Entrepreneurship

1.1. Entrepreneurial Opportunity: an Ambiguous Concept

In the past, researchers have become interested in entrepreneurship as a process (for example: Bygrave, and Hofer 1991; Covin, and Slevin 1991; Gartner 1988; Lumpkin, and Dess 1996) and opportunity identification appears to be the most critical step (the first) of this process (Hills 1995; Timmons, and al. 1987).

Although definitions of entrepreneurship vary (for example: Kirzner 1973; Schumpeter 1974; Stevenson, and al. 1989), the fundamental activity of entrepreneurship stays, according to Gartner (1985, 1990), "the creation of a new organization." Thus, a major component of any firm should be the identification of entrepreneurial opportunities (for example: Bhave 1994;
Hills 1995; Timmons, and al., 1987). Kirzner (1973, 1979) supports the idea that the central role of the entrepreneur is to recognize an economic disequilibrium and turn the opportunities that arise into an advantage. Bygrave (1989a, 1989b) called the creation of an organization to pursue an opportunity, the "entrepreneurial event". Some define entrepreneurship as the process of creating value by combining resources to exploit an opportunity (Stevenson, and Jarillo-Mossi 1989), in some cases, ignoring the resources available.

Timmons (1994) developed a model representing the three driving forces of entrepreneurship which include: (1) entrepreneurs (2) opportunity identification and (3) the resources necessary to create an organization. All around the process, there are factors such as risk, chaos, information asymmetries, resource scarcity, uncertainty, paradox and confusion that make it more complicated. Successful entrepreneurship could take place only when all these three elements fit each other. The challenge for the entrepreneur is to manipulate and influence the factors that are around, in real time, to increase his chances of success of the organization. As noted by Timmons (1994), time to move forward and not stop the process of identification and seizure of an opportunity is often based on timing.

A comprehensive study on past research related to the concept of opportunity shows that there are several definitions of this concept, a "situation" (Stevenson, and al. 1989), an "economic disequilibrium" (Kirzner 1973), or "an idea that leads to a business concept" (Bhave 1994) or a new "production function" (Schumpeter 1934). Timmons (1994) argues that an opportunity "has the qualities of being attractive, sustainable and timely. It is also rooted in a product or service that creates and brings value to the person who buys or whoever uses the last "(p. 87). The term "opportunity" is very similar to "love" everyone knows what it is, but it is difficult to define because it means different things to different people.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Definitions</th>
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<tbody>
<tr>
<td>SCHUMPETER (1934)</td>
<td>Opportunity = Production function</td>
</tr>
<tr>
<td>KIRZNER (1973)</td>
<td>Opportunity = Economic Disequilibrium</td>
</tr>
<tr>
<td>STEVENSON and JARILLO-MOSSI (1989)</td>
<td>Opportunity = A future situation judged feasible and desirable</td>
</tr>
<tr>
<td>BHAVE (1994)</td>
<td>Opportunity = An idea leading to a business concept</td>
</tr>
<tr>
<td>TIMMONS (1994)</td>
<td>Opportunité = has the quality of being attractive, durable and timely and is anchored in a product or service that creates value for the person who buys or uses.</td>
</tr>
<tr>
<td>VENKATARAMAN (1997)</td>
<td>Entrepreneurial Opportunity = it consists of a set of ideas, beliefs and actions that allow the creation of future products and services in the absence of a common market for them.</td>
</tr>
<tr>
<td>Shane (2003)</td>
<td>Opportunity = A situation in which a person can exploit a new business idea that has the potential to generate a profit</td>
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</table>

Table 1 – Some definitions of the concept of opportunity

It appears from the above definitions that the concept of opportunity is unclear. Indeed, according to the scientific and intellectual sensitivity of the researcher, we have an attempt to define the opportunity. It must be noted that all attempts bring any light on this concept, but the first problem to define is that it is a concept that is considered *a posteriori*. One of the attempts to synthesize the visions of opportunity identification that we find in the literature in entrepreneurship is the one proposed by Sarasvathy and al. (2003).

1.2. Entrepreneurial Opportunities Identification Processes

The conclusion that we made in the preceding paragraph allows us to further analyze the entrepreneurial opportunities identification processes. To do this, we will rely on the work of Sarasvathy et al. (2003). Sarasvathy et al. (2003) have indeed proposed a new typology of
entrepreneurial visions of opportunity into three categories based on three different ways of seeing the market that offers the economics literature. The first view sees the market as "a process of resource allocation", second as a "discovery process" and the third as a "creative process".

From these three visions, which are based respectively on the work of Hayek (1945), Knight (1921) and Buchanan, and Vanberg (1991, cited by Sarasvathy, and al. 2003), Sarasvathy, and al. (2003) have modeled entrepreneurial opportunity as a function, a process or a set of decisions. They have built a typology of processes of identification of entrepreneurial opportunities in three categories

1. Opportunity Recognition: If both sources of supply and demand exist rather obviously, the opportunity for bringing them together has to be "recognized" and then the match-up between supply and demand has to be implemented either through an existing firm or new firm. Franchises are an example.

2. Opportunity Discovery: If only one side exists, demand or supply, the other side has to be "discovered" before the much-up can be implemented. Examples include drugs for certain conditions (the application already exists, but the offer has to be found) and applications for new technologies such as personal computers (supply and demand there is to discover).

3. Opportunity Creation: If neither supply nor demand exists in an obvious manner, one or both have to be created, and multiple economic inventions in marketing, finance, etc… are made to make the opportunity come into existence.

According to Sarasvathy, and al. (2003), an opportunity is the possibility for economic agents to allocate resources to good use to achieve specific goals if we view the market as a place of
resource allocation (opportunity recognition). The opportunities are recognized in this case through a process of deduction. Following the vision of the discovery, an opportunity appears as the possibility of correcting errors in the system and creates new ways to achieve those purposes. Opportunities are discovered through the process of induction. For the creative perspective, an opportunity is defined as an opportunity to create new ways and new purposes. It is created through the process of abduction.

We find in opportunity discovery and recognition, the vision of the Austrian school and its followers, who see entrepreneurial opportunity as an objective reality, pre-existing entrepreneurs and identifiable as such (Kirzner 1997; Shane, and Venkataraman 2000; etc.). The main theoretical trends in this vision of opportunity support the idea that opportunities are objectively identifiable (Shane 2003), but the problem with these approaches is that they are not testable in the field since the unique opportunity with which we work is one that has become visible. Opportunities which are not perceived as such do not exist. An opportunity is there when someone sees it (Holmquist 2004). This vision of opportunity is near to the SWOT model (Strengths, Weaknesses, Opportunities, and Threats) in strategic management. In fact, opportunities in this model are objective realities in the environment and completely independent from organizations actions.

Opportunity creation corresponds therefore to the new vision of opportunity as a social construction emerging from interactions and confrontations between the wearer and the various stakeholders in the draft. We find this way of looking at opportunities in strategic management as well. Indeed, to survive in an environment where competition is increasingly difficult, an organization should no longer be limited to identifying opportunities within the environment but must act on its environment (Ansoff, 1975) and by being prospective
economic intelligence. The idea of crossing entrepreneurship and business intelligence appears naturally in this case (Chelly 2003).

To summarize, we believe that entrepreneurial opportunities do not exist independently of the individual entrepreneur and describe them well (objective realities independent contractor) does omitting a part of their nature. Meanwhile, entrepreneurs do not exist separately from their structural context and their social environment, and try to analyze them outside this context will not fully understand (Sarason and al. 2006). If we want to better understand the relationship entrepreneur / opportunity, we must necessarily follow a theoretical perspective that considers the interconnection between the entrepreneur and the opportunity.

As part of this paper, we conducted an exploratory study within entrepreneurs from difficult districts in France. Semi-structured interviews were conducted with them to have all the information on the identification phase of business opportunity.

2. Opportunity identification Processes within French Entrepreneurs from Difficult Districts

We have conducted three in-depth interviews with entrepreneurs from districts known as "difficult". The three contractors were from the Paris region. The social environment of the four contractors is very difficult. Indeed, the lack of infrastructure of all types, the presence of unemployment, violence and crime at rates higher than other places are that people in "difficult" neighborhoods live in a real ghetto. The entrepreneurs interviewed are from immigrant families and many are second generation through our interviews, we could identify points of convergence between the three firms regarding their process of identifying
entrepreneurial opportunities. Indeed, we found that all these entrepreneurs have identified business opportunities in direct connection with their environment in which they lived. Their thorough knowledge of the difficulties encountered by people living in these neighborhoods has enabled them to identify these business opportunities. Exhibits 1 and 2 below support our thoughts.

*How did you identify your market?*
*I conducted a market study. I was accompanied by local store management. This step allowed me to identify the market, check what the local demand. And to my surprise, the request is actually much greater than what we anticipated in our study. Indeed, we are in an area where unemployment is very high. With rates reaching 30% in that city, one in two households had no car and the price of a taxi fare for travel from one city to another in the suburbs is too high for people. These clients use the services of our company* (Interview 1 AS)

Exhibit 1 - The role of prior knowledge in identifying business opportunity

*How did you identify your market?*
*Our company meets a real need expressed by a population overlooked by traditional Internet access providers, to avoid social isolation. Our goal is to enable clients to computerize tough neighborhoods and enjoy the Internet. Do you know that 60% of households in this neighborhood do not have landline? The explanation is very simple: for this population, the subscription contracts "long life" are generally traditional source of litigation. Just a problem of unemployment, a situation of "no activity", or uncontrolled consumption for everything degenerates. To overcome this problem, we propose to STF (No Phone) offer comprehensive services enabling them to access the Internet "through the air, without being forced to take a fixed telephone subscription to obtain the ADSL" (Interview 3 AM)

Exhibit 2 - The role of prior knowledge in identifying business opportunity

Opportunities identification can be explained by the extensive prior knowledge of difficult areas that entrepreneurs have, but also and above all their knowledge of the needs of the population that lives in these difficult areas. All contractors we interviewed identified business opportunities to address problems facing the population of these neighborhoods hard. Indeed, having information literacy more important than other people do not live in these neighborhoods, they manage to identify business opportunities faster than the latter. The role of asymmetric information which spoke Hayek (1945) and is the origin of entrepreneurship is
evident in this case. The sample 2 also shows that knowledge of consumer expectations is critical to the identification of business opportunities for the entrepreneur AM. As he says, the offer fits very well in public that he was very familiar namely tough neighborhoods.

These conclusions are in the same direction statements Von Hippel (1994). In fact, according to the author, people tend to locate the information that is related to what they already know. For example, if an individual has knowledge about a particular technical field, it will be, according to Von Hippel (1994), more sensitive to information regarding this and pay no attention to information about other areas they do not know.

In the same vein and also based on the vision of the Austrian school, Shane (2000: 448) argues that "entrepreneurs are discovering the opportunities associated with the information they already hold," is to that the opportunities associated with their prior knowledge. According to Shane (2000), is having prior knowledge that triggers the identification of the value of new information. He then distinguishes three major dimensions of prior knowledge as may be important for the identification of entrepreneurial opportunities: those that relate to the market, those on different ways to serve those markets and related consumer issues.

In his qualitative study of eight different companies that have been created on the basis of eight different opportunities from a single technological innovation, Shane (2000) tested and confirmed a number of assumptions which may be summarized as follows:

- No business opportunity is evident to any aspiring entrepreneur (the reasoning is based on the idea that all people do not hold the same information at the same time, Kirzner (1997));
- Idiosyncratic prior knowledge creates an individual "knowledge corridor" that helps to identify some opportunities and not others (Hayek 1945; Ronstadt 1988; Venkataraman
The previous information that comes from past experiences, education or other means influence the capacity of the contractor to understand, extrapolate, interpret and apply the new data so that those who do not hold this information earlier can’t do (Shane, 2003).

As for the identification process of entrepreneurial opportunities, we found that contractors had completed more than a process of discovery that opportunity recognition or creation of opportunity. Indeed, we found for example that the contractor ME intended to create an upstream firm to identify the business opportunity. His approach is totally in the context of a discovery opportunity. Despite the fact that the contractor ME had no idea to start a business input, he has sought to identify against a business opportunity from the time he rented the room. The exhibit 3 gives our words.

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*How the idea to create such a company came to your mind?*

"I will surprise you, but this decision was completely thoughtless, and, to be totally honest, I reached the milestone on a” whim ". I found a well-placed and I hired without accurate picture of activity to perform. I just had more time to find this brilliant idea…

*This is not common but how the idea of restoration in the pasta comes?*

Indeed, this approach may not be common but that is what I was then given desire to create. I found myself with this room, and my savings. These two elements were decisive in my choice: I had to find an activity that required a local and a low intake. I immediately thought of the restoration. However, in a booming market, I do not want to do yet another "kebab, pizza or fast food" and I end up with competitors already established. I absolutely had to distinguish myself from others. I thought about selling pasta" (Interview 2 ME)

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**Exhibit 3 – The intention to create a company before identifying the business opportunity**

We find in the Contractor AM, another approach that is more intentional but it is always the discovery of a business opportunity. Indeed, as we noted above, with prior knowledge of the needs of people in her neighborhood, the contractor has correctly identified am a business opportunity, first, to avoid as he says " to move to illegal employment, and secondly, to provide a solution to the problems of these areas.
* How the idea of creating such a company came to your mind?

"At the time, I had a job as adviser to the insertion. This activity led me to consider what role I could play in this neighborhood to help people to reintegrate socially and to become aware of the priorities I wanted to give my life. You know, in those places, we are evolving rapidly to the illegal employment, job insecurity. The problems become our lives! To my partners and me, the creation of business was our way out and the urban zone a boon that France proposed to us! Our idea was hatched six years ago, turning a chance meeting. Beyond the technical, commercial, financial, it has become for us a real adventure. Our company was born from our desire to create our own affairs, to combine our positive energies and suggest to this audience, we know well, offer personalized service that exists nowhere. It's a market opportunity which, in time, should absolutely continue and grow" (Interview 3 AM)

Exhibit 4 – Discovery of business opportunities

The process of opportunity discovery seems to be predominant in our results. This is suggests that we can find these results to a larger scale due to quantitative research. We believe that the special districts and the social environment in which entrepreneurs saw the push toward the discovery of opportunity rather than other process for identifying entrepreneurial opportunities. The social environment plays a role much greater among entrepreneurs from deprived areas than in other geographical areas.

Conclusion

The characteristic of entrepreneurs from "difficult" districts about their process of identifying entrepreneurial opportunities lies in the fact that they usually look for business opportunities to meet especially the difficulties faced by their neighbors. Creating an organization is for them a way to get out of precarious situations and especially not to divert the illegal work which is found very often in this type of neighborhood. Their intention to create a business, therefore precede any action by their part. So they pursue a process of opportunity discovery rather than another. This finding deserves further exploration and generalized to a larger sample of entrepreneurs.
We have attempted in this paper include some process for identifying entrepreneurial opportunities in a group of entrepreneurs from districts called "difficult". We are aware that our sample is too small but the aim of this exploratory study was to map out the ground for more work and a quantitative questionnaire methodology to validate assumptions.

This work has also helped to ask other questions about the process of identifying entrepreneurial opportunities. Indeed, the question of what role could be played by prior knowledge or intent of starting a business in identifying business opportunities is not yet addressed in a comprehensive manner. Similarly, the question of whether entrepreneurs from the city called "difficult" identify real business opportunities in direct link with their country of origin since there is that they generally come from immigration.

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How to assess entrepreneurial potential

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Abstract
This study presents a theoretical model on entrepreneurial potential and its operationalization through an Entrepreneurial Potential Assessment Inventory (EPAI). The model is composed of eleven first-order skills that were previously evidenced as characteristic of entrepreneurial potential, and four second-order dimensions. The instrument of assessment is composed of 33 items and was tested on samples of university students (N=580) and young employees (N = 552). Multi-group confirmatory factor analyses were conducted and results evidenced good fit indexes. Also presented is the Entrepreneurial Potential Index (EPI) algorithm and the distribution in categories. Results evidence that young employees present a greater EPI mean value. The Inventory and the Index are presented, tested and validated methodologically. Regarding the practical implications, the Inventory and the Index can be established as a tool of high value to the community to help identify competencies requiring development, and to help design or adjust training courses in entrepreneurship.

Key-Words - Entrepreneurial Potential; Entrepreneurial Potential Assessment Inventory; Entrepreneurial Potential Index

Introduction

Multidisciplinary research on the entrepreneurship process has emphasized the importance of entrepreneurship promotion as a critical factor in economic development.
(Estrin, Meyer, and Bytchkova, 2006), social development (Licht and Siegel, 2006), self-employment (Parker, 2006), and technological and innovation development (for example, Berchicci and Tucci, 2006).

More than seventy years after the first contributions of Joseph Schumpeter (1934), entrepreneurship research is becoming a more stable field with his own theoretical, empirical and methodological debates (for example, Connelly, Ireland, Reutzel, and Coombs, 2010). However, there are still some theoretical, empirical and practical aspects that require deeper research, especially with regard to explaining the processes that contribute to enhancing the success of entrepreneurship programs.

The frameworks of these programs assume that it is essential to encourage the young, university students and young employees in particular, to develop entrepreneurship and a spirit of innovation. However, despite extensive entrepreneurial programs and the emphasis on academic entrepreneurship (for example, van Praag, 2009), knowledge about the operationalization and measurement of the entrepreneurial potential is still scarce and poorly systematized.

The present study aims to contribute to the development of the theoretical and empirical entrepreneurship field, through the proposal of an entrepreneurial potential assessment instrument and index. Thus, the present paper (a) presents a theoretical model for the operationalization of entrepreneurial potential; (b) empirically tests the theoretical model on two samples: one composed of university students and the other composed of young employees; (c) contributes to the empirical validity of the Entrepreneurial Potential Assessment Inventory (EPAI); and (d) presents the Entrepreneurial Potential Index (EPI).

Literature has evidenced that including entrepreneurship on graduation courses contributes to the intention to create new ventures (for example, Sanz-Velasco, 2007;
Shinnar, Pruett, and Toney, 2009). Up to the previous decade, the trend to teach entrepreneurship on the graduate courses was mainly focused on the management and business fields (for example, Volkman, 2004). Nowadays, there is dissemination to the main fields, such as the arts, geography, environmental science and nursing (for example, Gose, 1997; Maguire and Guyer, 2004; Dickerson and Nash, 1999).

Today it is largely assumed that academic entrepreneurship is one of the fundamental motors of economic growth and wealth creation (Shane, 2004b).

As a result, and in accordance with the emergence of academic entrepreneurship, universities have pursued policies that promote the creation of academic entrepreneurship centers and encouraged students, researchers and academics to patent their discoveries, spin-offs, and technological licenses, thus effectively expanding the universities’ activities (for example, Wood, 2009). Another strategy designed to foster academic entrepreneurship focuses on creating entrepreneurial opportunities and training students in the main skills, competencies and entrepreneurial activity (van Praag, 2009). One example of this is the initial financial funds for business opportunities to motivate academics and university students to become entrepreneurs and to launch new ventures (Shane, 2004a; Wright, Clarysse, Mustar, and Lockett, 2007). Another is the European Commission’s Entrepreneurship Action Plan to promote an agenda on entrepreneurship policy (Commission of the European Communities, 2006). Thus, it is clearly evident that the importance of promoting entrepreneurship is a widespread issue, and one that has the attention of academic, governmental and organizational agents.

It is becoming more and more important to focus on the academic agents and on the universities’ role in promoting entrepreneurial potential. As far as the university students and young employees are concerned, and with regard to the current economic
situation, entrepreneurship emerges as a strategy to tackle unemployment (for example, Santarelli, Carree, and Verheul, 2009; Remeikiene and Startiene, 2009). There is a clear need for research on academic entrepreneurship and university technology transference regarding entrepreneurial projects (Link and Siegel, 2007).

University students’ aspirations to become entrepreneurs have been studied in several cultural contexts, using different methodologies. For example, a recent study conducted in South Africa evidenced that the planned behavior theory (for example, Fishbein and Ajzen, 1977) explains 27 percent of the entrepreneurial intention variance among students (Gird and Bagraim, 2009). Another study on aspiring to become entrepreneur conducted in Japan evidenced that, for example, the unemployment rate, market growth, and market size all have a positive effect on the potential for entrepreneurship (Harada, 2005). However, the focus of that study is on venture level analysis and assessing the potential of the business idea, and as such refers to a different level of analysis from the present study.

Yet another study assesses the entrepreneurial potential of U.S. and German students and the results evidence that the German students score significantly lower than the U.S. respondents (Raab, Stedham, and Neuner, 2005). However, their entrepreneurial potential was assessed with an instrument developed by Müller (2002), which assesses personality dimensions and does not reflect the integrative literature overview.

Despite the aforementioned research on intention to launch a venture and on entrepreneurial potential, there are evident theoretical gaps and there is a clear need to develop an acceptable assessment instrument. More specifically, it has been shown that researchers apply different assessment methodologies on the intention to launch a new venture or on entrepreneurial potential, presenting different operationalizations among
the different theoretical constructs and thus weaken validation indicators (for example, Gird and Bagraim, 2009; Raposo, Paço and Ferreira, 2008; Teixeira, 2008; Couto and Tiago, 2009). Intending to get past these difficulties, the present research aims to clarify entrepreneurial potential and to empirically validate its operationalization.

**Entrepreneurial potential: Construct Theoretical Model**

The entrepreneurship process is deeply associated to the individuals’ characteristics (Baum, Frese, Baron, and Katz, 2007) given that he/she is the main agent in the decision making process to implement entrepreneurial initiatives and to assume the recurrent consequences. Thus, research has focused on the identification and description of the psychological characteristics, traits or personality characteristics that differentiate the entrepreneur (for example, Baron and Locke, 2004; Brandstätter, 1997). In several decades of research on the question “Who is an entrepreneur?” (Carland, Hoy, and Carland, 1988; Gartner, 1989) empirical evidence is disperse and fragmentized in the literature, which makes it difficult to develop a broad theoretical body of evidence.

Frequently, assessment instruments refer to the operationalization of specific psychological constructs such as entrepreneurial self-efficacy (for example, McGee, Peterson, Mueller, and Sequeira, 2009). These scales are not sufficient to assess a pattern or a typical entrepreneurial competencies profile (for example, Lumpkin, Cogliser, and Schneider, 2009) because: (a) theoretically, there are different conceptualizations on the same construct and there is no integration of the several psychological traits in the comprehensive model, which would comprise all of the most distinctive psychological traits or individual dimensions; (b) methodologically, there are different scales developed to assess the same construct and most of them inadequately
fulfill the validation and psychometric requirements; (c) in a reality based perspective, the existing assessment scales are not sufficient to be applied to the entrepreneurial activity, because they are time expensive, and the coding system is difficult and not comparable and intuitive for the entrepreneurship agents.

Thus, there is a clear need to develop an integrative theoretical model for entrepreneurial potential: one that will bring together the most outstanding aspects of previous empirical research, and theoretical suggestions. It is important, also, to develop an assessment instrument based on this integrative theoretical model, which would allow the entrepreneurial potential construct to be assessed in one single instrument.

Departing from the evidence in the literature, it is possible to explain the entrepreneurial potential construct on four dimensions: (a) entrepreneurial motivations; (b) psychological competencies; (c) social competencies; and (d) management competencies.

**Entrepreneurial motivation** has been identified in the literature as one of the greatest predictors of a new venture’s success (Baum, Locke, and Smith, 2001). It expresses focused and directed effort on the entrepreneurial activity (for example, Locke and Baum, 2007). The *psychological competencies* refer to the broad group of skills and attributes which characterize entrepreneurial individuals (for example, Chell, 2008). The *social competencies* denote an individual’s ability to interact effectively with others (for example, Baron, 2000). The *management competencies* are defined by the basic and transversal competencies in business management (for example, Baum, Locke, and Smith, 2001).

Given that there are various studies and that the empirical evidence available is diverse, there is an urgent need for systematization of the characteristics that make identifying entrepreneurial potential possible. Table 1 presents a summary of the typical
entrepreneur’s main characteristics, organized according to entrepreneurial motivations, psychological competencies, social competencies and management competencies.
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Characteristics</th>
<th>Definition</th>
<th>Empirical Evidences / Theoretical Propositions</th>
<th>Autores</th>
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<tbody>
<tr>
<td><strong>Entrepreneurial Motivations</strong></td>
<td>Desire to be independent</td>
<td>Autonomy and strategic decision making intention autonomy</td>
<td>Strong desire for personal independence influences the development of family businesses; entrepreneurs show a preference for independent tasks</td>
<td>Moyer and Chalofsky, 2008; Alstete, 2008; Utsch, Rauch, Rothfuss and Frese, 1999</td>
</tr>
<tr>
<td>Economic motivation</td>
<td>Desire to achieve economic profit</td>
<td>One of the most cited characteristics of the successful entrepreneurs is the need to create money. Entrepreneurs perceive their work as more profitable</td>
<td>Alstete, 2008; Brice, and Nelson, 2008</td>
<td></td>
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<tr>
<td><strong>Innovation capacity</strong></td>
<td>Capacity to engage in inventive development processes, resulting in the introduction of new products, processes or market services</td>
<td>There are significant differences between entrepreneurs and employers. The capacity for innovation is one of the main characteristics on the entrepreneurial human capital</td>
<td>Edwards and Gordon, 1984; Engle, Mah and Sadri, 1997; Marvel and Lumpkin, 2007; Utsch, Rauch, Rothfuss and Frese, 1999</td>
<td></td>
</tr>
<tr>
<td><strong>Psychological competencies</strong></td>
<td>Emotional Intelligence</td>
<td>Ability to perceive, interpret and manage emotions from self and from the others</td>
<td>Results evidence that entrepreneurs score relatively high on emotional intelligence</td>
<td>Baron and Markman, 2000; Cross and Travaglione, 2003; Higgs and Dulewicz, 2003</td>
</tr>
<tr>
<td>Resilience</td>
<td>Ability to react to unexpected results in a risky and uncertain situation. This is a multidimensional characteristic, which has been conceptualized as a strategy for coping with stress and uncertainty</td>
<td>In entrepreneurship the uncertainty level is higher than in organizational factors. Entrepreneurs have to know how to design and implement adaptable behaviours. Empirical research evidences that entrepreneurs show greater levels of persistency than non-entrepreneurs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Competencies</strong></td>
<td>Persuasion and Communication Capacity</td>
<td>Ability to change own and others’ attitudes and behaviours to create the circumstances most likely to contribute to entrepreneurial success</td>
<td>The ability to interact effectively with others has a positive effect on entrepreneurial success. This assumption is based on the prediction that the greater the entrepreneurial social competencies, the greater the probability of success. Entrepreneurs consider themselves as having a greater capacity for persuasion. Recent studies have evidenced that the social competencies bear significant relation to new venture performance measures, and this relation is mediated through success in information seeking and resources.</td>
<td>Baron and Markman, 2000; Hoehn-Weiss, Brush, and Baron, 2004; McClelland, 1987; Baron and Tang, 2009</td>
</tr>
<tr>
<td>Network development capacity</td>
<td>Ability to develop a network between entrepreneurs and other individuals who can provide resources for business implementation and development</td>
<td>It was identified as one of the entrepreneurial performance predictors. The ability to develop the social network, together with other constructs, has a direct effect on venture creation development.</td>
<td></td>
<td>Johannisson, 1988; Larson, 1991; Baughn, Cao, Le, Lim and Neupert, 2006; Chay, 1993; Lee and Tang, 2001</td>
</tr>
<tr>
<td><strong>Entrepreneurial Self-Efficacy</strong></td>
<td>Individual belief in the capacity to successfully perform the entrepreneurial</td>
<td>It is an important predictor of the intention to create new ventures. Self-efficacy among entrepreneurs is fundamental since they must be confident in their ability to perform different tasks and to forecast situations. Individuals with greater self-</td>
<td></td>
<td>Bandura, 1982, 1997; Barbosa, Gerhardt, and Kickul, 2007; Boyd and Vozikis, 1994; Zhao, Seibert, and Hills, 2005; Baum and Locke, 2004;</td>
</tr>
<tr>
<td>Management Competencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>goals</strong></td>
<td>efficacy show a greater probability of resistance when problems emerge; present a greater degree of initiative and have a great success expectation. An empirical study evidenced that entrepreneurial self-efficacy was linked to the intention to create a new venture.</td>
<td>McGee, Peterson, Mueller and Sequeira, 2009; Baum and Locke, 2004; Speier and Frese, 1997; Heckhausen and Schulz, 1995; Chen, Greene, and Crick, 1998; Poon, Ainuddin, and Junit, 2006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Vision** | Ability to preview and visualize the goals, objectives and future realizations | Vision capacity has been shown to be a predictor of entrepreneurial venture development; it has been identified as a crucial motivational element in charismatic leadership. | Chell, 2008; Baum, Locke and Smith, 2001; Baum, Locke, and Kirkpatrick, 1998; Bass, 1990 |

| **Resources Mobilization capacity** | Ability to gather the resources to manage the venture (financial and material) | Identified as an important predictor of entrepreneurial success, given that resources are an essential feature of new venture development and make it easier for new ventures to adjust to complex environments. | Ramachandran and Ray, 2006; Romanelli, 1987; Tan and Peng, 2003 |

| **Leadership Capacity** | Capacity to mobilize and manage others allied to the business growth vision | Entrepreneurs share some characteristics with leaders. | Chell, 2008; Vecchio, 2003; Eyal and Kark, 2004 |
Rather than producing an exhaustive description of evidence and putting forward theoretical entrepreneurial traits, it is more important to highlight the main aspects that really allow us to identify and differentiate the different dimensions to entrepreneurial potential. Thus, and in accordance with the literature review, figure 1 presents a conceptual model that integrates the four central dimensions that definitively contribute to the emergence of entrepreneurial potential.

Based on this conceptual model, we operationalized each dimension through a set of indicators previously tested in empirical research and others specifically created for this study. This operationalization aimed to create a measurement instrument of entrepreneurial potential with psychometric rigorousness. The procedures to create new assessment instruments suggested by the specific literature (for example, Kline, 1993; Devellis, 1991) were followed. Thus, the present study reports the development of a structured survey with 42 items that operationalizes the main theoretical and empirical
constructs that evidence a significant link with entrepreneurial potential. The final version of the Entrepreneurial Potential Assessment Inventory (EPAI) includes thirty-three items. The Inventory was tested in a sample of 580 university students and in a sample of 552 young employees.

Method

Sample

This study includes a sample of 580 university students and another sample of 552 young workers, involved in the labor market for 3 years. Of the university students, all aged between 17 and 30, 62.3 percent are female with a mean age of 22.7 (SD = 4.2). The great majority of the students are undergraduates (92.2 percent) and 7.8 percent are doing a masters degree. With regard to the young employees (N = 552), their ages range from 18 to 30, they are all involved in the labor market and 56.6 percent are male. The mean age is 25.1 (SD = 2.3). The great majority are graduates (73.3 percent), 23.3 percent have a masters degree and 3.3 percent have a PhD. Table 2 presents the demographic description of the samples.

<table>
<thead>
<tr>
<th></th>
<th>University Students</th>
<th>Young Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 580</td>
<td>N = 552</td>
</tr>
<tr>
<td>Sex</td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>37.7</td>
<td>56.5</td>
</tr>
<tr>
<td>Female</td>
<td>62.3</td>
<td>43.5</td>
</tr>
<tr>
<td>Area of Specialization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Sciences</td>
<td>23.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>32.6</td>
<td>16.6</td>
</tr>
<tr>
<td>Management Sciences</td>
<td>23.1</td>
<td>44.6</td>
</tr>
<tr>
<td>Technological Sciences</td>
<td>20.9</td>
<td>34.3</td>
</tr>
</tbody>
</table>
**EPAI Inventory Development Procedure and Measures**

To develop the Entrepreneurial Potential Assessment Inventory (EPAI), semi-structured interviews of entrepreneurs were first conducted to assess the dimensions identified in the relevant literature, and their applicability. Twelve interviews were conducted and a first inventory version of 84 items was compiled, based on evidence from empirical studies, literature review and information from the interviews. The first inventory version was discussed with the twelve entrepreneurs with the aim of assessing how adaptable the items contained in it would be to the entrepreneurial context.

After data content analysis from the entrepreneurs’ interviews, and based on the evidence from a previous literature review (for example, Brice and Nelson, 2008; Mueller and Thomas, 2000; Cross and Travaglione, 2003; Markman, Baron, and Balkin, 2005; Baron and Markman, 2000; Chen, Greene, and Crick, 1998), we compiled an inventory form with 42 items using the 5 points concordance scale (1 = completely disagree; 5 = completely agree). These items resulted from adapting some items used in previous studies (for example, Chen, Greene, and Crick, 1998; Baron and Markman, 2000), and another created specifically for EPAI.

**Measures**

*The desire to be independent* was measured by four items as, for example, “One of the most important things to me is having a job were I’m my own boss” or “One of my life motto’s is to have an independent life”.

*Economic motivation* was measured by four items (for example, “I will do my best to make as much money as possible” or “One of my mottos is to have the most money”).
Innovation capacity was measured by four items, as for example, “People often ask me for help with creative activities” or “I often surprise people with my new ideas”.

Emotional intelligence was measured by four items, among them there were “I easily recognize my emotions as I experience them” or “I have control over my emotions”.

Resilience was measured by four items, as for example, “In difficult times I tend to focus on what helps me to overcome them” or “When something negative happens to me I am unwilling to respond” (inverted).

Communication and persuasion capacity was measured by four items (for example, “In most situations I can make other people to do what I want” or “Normally, I am able to persuade others of many things”).

Network development capacity was measured by four items, as for example, “I know people from a variety of different places” or “Last month I did not add anyone to my network of contacts on my phone” (inverted).

Entrepreneurial self-efficacy was measured by four items, among them were: “When I decide to start any business project, I know I will see it through” or “I know that in one way or another, I usually get what I want”.

Vision was measured by four items (for example, “I can see clearly how to implement unlikely initiatives” or “Usually I define effective strategies to achieve the goals I want”).

Resources mobilization capacity was measured by five items as for example “Normally, I can find the resources to implement the initiatives I have” or “Generally I know how to get the resources I need to move forward with the initiatives that are important”.

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Leadership capacity was measured with five items, as for example “Usually I can mobilize people for the initiatives I propose” or “I can easily lead people who have differing ideas on initiatives that I seek to achieve”.

Results

Factorial Confirmatory Factor Analysis on the Entrepreneurial Potential Model

A confirmatory factor analysis using the AMOS 7 software (Arbuckle, 2006) was performed to assess adjustment of the entrepreneurial potential theoretical model to the data collected from the university students and the young employees.

In accordance with the classic model of survey development conducted by factor analysis (Kline, 1993), preliminary factor analyses were performed\(^1\). The results evidenced that the loadings of some items were not appropriate and consequently, they were deleted from the model. Thus, the best confirmatory model for the operationalization of entrepreneurial potential that we arrived at comprised 33 items.

Figure 2 presents the confirmatory model of the Entrepreneurial Potential Assessment Instrument (EPAI) with the first order and second order dimensions.

\(^1\) We do not present the detailed description of this analysis for reasons of parsimony.
The confirmatory factor analysis of the entrepreneurial potential construct (EPAI) was developed in two distinct stages. Firstly, the second order confirmatory model constructs were tested (i.e. entrepreneurial motivations, psychological competencies, social competencies and management competencies). Table 3 presents the fit indexes of the second order confirmatory factor analysis. The results evidence good fit indexes for the four models tested separately.

### Table 3
Fit Indexes of the second order confirmatory factor analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2 / df$</th>
<th>CFI</th>
<th>RMSEA</th>
<th>RMSEA confidence interval 90 percent</th>
<th>AIC</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 – Entrepreneurial Motivations</td>
<td>9.25</td>
<td>4</td>
<td>0.05</td>
<td>2.31</td>
<td>0.99</td>
<td>0.03</td>
<td>0.01 – 0.07</td>
<td>31.25</td>
<td>0.02</td>
</tr>
<tr>
<td>Model 2 – Psychological Competencies</td>
<td>49.49</td>
<td>23</td>
<td>0.01</td>
<td>2.15</td>
<td>0.95</td>
<td>0.03</td>
<td>0.02 – 0.04</td>
<td>93.49</td>
<td>0.03</td>
</tr>
<tr>
<td>Model 3 – Social Competencies</td>
<td>28.98</td>
<td>8</td>
<td>0.01</td>
<td>3.62</td>
<td>0.97</td>
<td>0.05</td>
<td>0.03 – 0.07</td>
<td>54.98</td>
<td>0.04</td>
</tr>
<tr>
<td>Model 4 – Management Competencies</td>
<td>226.96</td>
<td>83</td>
<td>0.01</td>
<td>2.74</td>
<td>0.95</td>
<td>0.04</td>
<td>0.03 – 0.05</td>
<td>300.97</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Next, the Entrepreneurial Potential Assessment Inventory (EPAI) model, including the 33 items, was developed as shown in figure 2. The model was first tested on each sample separately. The fit indexes for the university students’ sample ($\chi^2 =$
and for the young employees’ sample ($\chi^2 = 1090.38; df = 454; p < 0.01; \chi^2/df = 2.40; CFI = 0.90; RMSEA = 0.04; SRMR = 0.04$) evidence an adequate fit of the data to the model. The standardized regression coefficients analysis shows that the relationship between the first order and second order is statistically significant ($p < 0.05$). The second order standardized regression coefficients of the university students are: 

$B_{\text{entrepreneurial motivation}} = 0.34^{**}; B_{\text{psychological competencies}} = 0.85^{**}; B_{\text{social competencies}} = 0.62^{**}; B_{\text{management competencies}} = 0.97^{**}, \quad {^{**}p < 0.01}$.

In the young employees’ sample, the second order standardized regression coefficients are: $B_{\text{entrepreneurial motivation}} = 0.44^{**}; B_{\text{psychological competencies}} = 0.90^{**}; B_{\text{social competencies}} = 0.67^{**}; B_{\text{management competencies}} = 0.96^{**}, \quad {^{**}p < 0.05}$. The one factor confirmatory factor analysis evidenced poor adjustment to the data.

The multi-groups confirmatory factor analysis, including both the university students and the young employees, evidenced good fit indexes ($\chi^2 = 1594.32; gl = 908; p < 0.01; \chi^2/df = 1.76; CFI = 0.89; RMSEA = 0.03$) suggesting that there is structural invariance in the entrepreneurial potential construct. In other words, the structure of the entrepreneurial potential construct is both suitable for university students and young employees.

This result supports the validation of the theoretical model proposed for the operationalization of the entrepreneurial potential construct (Byrne, 1989). Thus, there are theoretical and empirical arguments to support the development of the eleven first order dimensions: desire to be independent, economic motivation, innovation capacity, emotional intelligence, resilience, communication and persuasion capacity, network development capacity, entrepreneurial self-efficacy, vision, resources mobilization capacity, and leadership capacity. Analogously, there are theoretical and empirical arguments to support the development of the four second order dimensions:
entrepreneurial motivations, psychological competencies, social competencies, and management competencies.

The construct reliability assessment was computed in accordance with Hair, Black, Babin, Anderson, and Tatham (2006). The entrepreneurial potential construct evidences a reliability of 0.88 suggesting that there is internal consistency among the items used in operationalization. Table 5 shows the reliability of the second order constructs (Hair, Black, Babin, Anderson, and Tatham, 2006). The first order reliability indexes are not presented for reasons of parsimony.

<table>
<thead>
<tr>
<th>Construct Reliability</th>
<th>Hair, Black, Babin, Anderson, and Tatham, 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. entrepreneurial motivation</td>
<td>0.61</td>
</tr>
<tr>
<td>2. psychological competencies</td>
<td>0.62</td>
</tr>
<tr>
<td>3. social competencies</td>
<td>0.71</td>
</tr>
<tr>
<td>4. management competencies</td>
<td>0.82</td>
</tr>
</tbody>
</table>

**Descriptive Analysis of the EPAI Dimensions and Comparative Analysis among University Students and Young Employees**

The descriptive statistics of the first-order variables on the university students and young employees are presented in table 6. The network development capacity presents the lowest mean value (M = 2.9) and the entrepreneurial self-efficacy presents the highest mean value (M = 4.1). There are significant statistical differences among the university students and the young employees with regard to the mean values of desire for independence ($F(1;1130) = 19.99, p < 0.01$), innovation capacity ($F(1;1130) = 3.48, p < 0.01$), emotional intelligence ($F(1;1130) = 14.12, p < 0.01$), communication and persuasion capacity ($F(1;1130) = 55.20, p < 0.01$), network development capacity
\( F(1;1130) = 77.67, p < 0.01 \), vision \( F(1;1130) = 30.01, p < 0.01 \), resources mobilization capacity \( F(1;1130) = 16.69, p < 0.01 \), leadership capacity \( F(1;1130) = 33.53, p < 0.01 \), and entrepreneurial self-efficacy \( F(1;1130) = 47.53, p < 0.01 \).

<table>
<thead>
<tr>
<th>1. desire for independence*</th>
<th>3.6</th>
<th>0.8</th>
<th>3.5*</th>
<th>3.7*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. economic motivation</td>
<td>3.2</td>
<td>0.9</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>3. innovation capacity*</td>
<td>3.3</td>
<td>0.6</td>
<td>3.2*</td>
<td>3.4*</td>
</tr>
<tr>
<td>4. emotional intelligence*</td>
<td>3.5</td>
<td>0.6</td>
<td>3.4*</td>
<td>3.6*</td>
</tr>
<tr>
<td>5. resilience</td>
<td>3.2</td>
<td>0.7</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>6. communication and persuasion capacity*</td>
<td>3.6</td>
<td>0.6</td>
<td>3.4*</td>
<td>3.7*</td>
</tr>
<tr>
<td>7. network development capacity*</td>
<td>2.9</td>
<td>0.6</td>
<td>2.7*</td>
<td>3.0*</td>
</tr>
<tr>
<td>8. vision</td>
<td>3.3</td>
<td>0.6</td>
<td>3.2*</td>
<td>3.4*</td>
</tr>
<tr>
<td>9. resources mobilization capacity*</td>
<td>3.6</td>
<td>0.5</td>
<td>3.6*</td>
<td>3.7*</td>
</tr>
<tr>
<td>10. leadership capacity*</td>
<td>3.6</td>
<td>0.5</td>
<td>3.5*</td>
<td>3.7*</td>
</tr>
<tr>
<td>11. entrepreneurial self-efficacy*</td>
<td>4.1</td>
<td>0.5</td>
<td>4.0*</td>
<td>4.2*</td>
</tr>
</tbody>
</table>

* significant differences, \( p < 0.05 \)

Based on the previous evidence of the validity of the second-order variables of the entrepreneurial potential construct, the dimensions of entrepreneurial motivation, psychological competencies, social competencies and management competencies were computed. The descriptive analysis of the second-order dimensions allows a holistic overview of the entrepreneurial potential differences among the university students and the young employees (Table 7).

| 1. entrepreneurial motivation* | 3.3* | 3.4* |
| 2. psychological competencies* | 3.3* | 3.4* |
| 3. social competencies*        | 3.1* | 3.4* |
| 4. management competencies*    | 3.6* | 3.8* |

* significant differences, \( p < 0.05 \)
There are significant differences between university students and young employees with regard to entrepreneurial motivation \((F(1;1130) = 6.22, p < 0.01)\), psychological competencies \((F(1;1130) = 32.20, p < 0.05)\), social competencies \((F(1;1131) = 23.28, p < 0.01)\) and management competencies \((F(1;1130) = 110.13, p < 0.01)\). Compared to the university students, young employees evidence greater mean values in all second-order dimensions.

**Entrepreneurial Potential Index - EPI**

After validating the entrepreneurial potential construct through the EPAI Inventory, we proceeded with development of the Entrepreneurial Potential Index (EPI).

This index is composed of the four entrepreneurial potential operationalization variables: psychological competencies (PC), social competencies (SC), management competencies (MC) and entrepreneurial motivation (EM).

In accordance with what the literature suggests, entrepreneurial motivation (EM) has a direct effect on venture launch development (Baum, Locke, and Smith, 2001) and is suggested as the main catalyst of the entrepreneurial process (for example, Shane, Locke, and Collins, 2003; Wainer and Rubin, 1969; Correia Santos, Curral, and Caetano, 2010). In this line of reasoning, entrepreneurial motivations are conceptualized as the greatest weight component. Thus, entrepreneurial motivation emerges on Index IPE as a squared component \((EM^2)\).

Management competencies (MC) were also identified in a previous literature review as crucial to venture launch, especially as these include vision and leadership competencies (for example, Baum, Locke, and Kirkpatrick, 1998). In the present study, management competencies also include entrepreneurial self-efficacy, which has been successively evidenced as an important predictor of successful entrepreneurial
initiatives (for example, Bandura, 1982, 1997; McGee, Peterson, Mueller and Sequeira, 2009). So, management competencies are a relevant contribution to the entrepreneurial potential construct. Consequently, management competencies also have a higher weight, although smaller than that of entrepreneurial motivation. This weight of the management competencies is mathematically translated by the simple multiplication of management competencies with the other variables.

The psychological competencies (PC) and social competencies (SC) are two essential and complementary pillars of entrepreneurial initiatives (for example, Baum and Locke, 2004). Research has evidenced entrepreneurs’ individual traits, including both psychological and social characteristics, stressing the importance of both competencies (for example, Chell, 2008). Consequently, the Index EPI includes both the psychological and social competencies, attributing to both the same weight, translated by the arithmetic sum of both.

Based on these theoretical and empirical evidences and the rationale presented, the Index EPI was computed using the following mathematical formula:

\[(1) \quad EPI = (PC + SC) \times MC \times EM^2\]

Where, EPI = Entrepreneurial Potential Index; 
PC = Psychological Competencies; 
SC = Social Competencies; 
MC = Management Competencies; 
EM = Entrepreneurial Motivation.

As previously highlighted, due to theoretical and empirical reasons, management competencies and entrepreneurial motivation have different weights on the Index EPI computation. This index proves to be an important tool for the quantification and measurement of entrepreneurial potential. According to the psychometric suggestions,
the gross results of the measurement sample should be changed into standardized results for ease of comprehension (for example, Laveault and Grégoire, 2002; Kline, 1993).

The gross results of the measurement sample were transformed into standardized results with mean 50 and standard deviation 10 (Cronbach, 1976). Thus, the EPI transformed was computed with mean 50 and standard deviation 10. This transformation allowed the creation of five categories for the distribution of the EPI values. The transformed values and category identification of the EPI distribution are presented in table 8.

<table>
<thead>
<tr>
<th>EPI Class Identification</th>
<th>0 – 19</th>
<th>20 - 39</th>
<th>40 - 59</th>
<th>60 – 79</th>
<th>80 – 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far Below the Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below the Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far Above the Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data analysis of the Index EPI, the mean values comparison and the distribution of categories among the university students and the young employees are presented in table 9.

<table>
<thead>
<tr>
<th>Means and standard deviations of EPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>University Students (N = 580)</td>
</tr>
<tr>
<td>Young Employees (N = 552)</td>
</tr>
</tbody>
</table>

The results show that the young employees present a higher mean EPI (M = 51.6) than the university students (M = 48.5). The results also show that a higher
percentage of participants are in the average category. At the same time, there is a lower percentage of young employees with a low average EPI (8.2 percent), and there is a higher percentage in the above average and far above average categories (19.0 percent and 1.3 percent respectively).

**Discussion**

The present paper presents a theoretical model validated empirically on the operationalization of the entrepreneurial potential construct. More specifically, a theoretical model integrating the differentiating characteristics of entrepreneurs in the main literature and an assessment instrument, were developed. The assessment instrument - the Entrepreneurial Potential Assessment Inventory - was applied to a sample of university students and to a sample of young employees. The Entrepreneurial Potential Index (EPI), an important tool for the quantification and comparison of different individuals’ entrepreneurial potential, was also developed.

The entrepreneurial potential theoretical model suggests that the construct comprises eleven first-order dimensions: desire for independence, economic motivation, innovation capacity, emotional intelligence, resilience, communication and persuasion capacity, development network capacity, vision, mobilization resources capacity, leadership capacity and entrepreneurial self-efficacy. These eleven first order variables express four second-order dimensions: entrepreneurial motivation, psychological competencies, social competencies, and management competencies. This theoretical model was successfully tested by multi-group confirmatory factor analysis, using university student and young employee samples.

The results show that the network development capacity presents the lowest mean value and the entrepreneurial self-efficacy presents the highest mean value.
Moreover, this research shows that there are significant statistical differences among the university students and the young employees with regard to the mean values of desire for independence, innovation capacity, emotional intelligence, communication and persuasion capacity, network development capacity, vision, resources mobilization capacity, leadership capacity and entrepreneurial self-efficacy.

Generally, young employees evidence a higher mean value in all dimensions (except for economic motivation and resilience) than university students. There are also significant differences among the second order dimensions: entrepreneurial motivation, psychological competencies, social competencies and management competencies. Thus, there are evident differences in the pattern of the first and second order dimensions of the entrepreneurial potential of the university students and young employees.

The superior results for the young employees could be due to nature of the dimensions assessed in the EPAI. More specifically, the EPAI assesses competencies, and previous research (for example, Caetano, and Tavares, 2000; Cascio, 1991) evidences that these are changeable dimensions depending on previous experience, knowledge acquisition, and necessity.

This study also presented the development of the Entrepreneurial Potential Index (EPI). This Index makes it possible to position individuals on a measurable continuum of entrepreneurial potential, and thus allows the comparison among them. The results evidence that young employees show a greater mean value of EPI than university students. Moreover, there are a greater percentage of young employees with a far above average EPI.

Again, this suggested superiority in the young employees’ sample can be explained by the nature of the dimensions assessed in the inventory (EPAI). Competencies development is dependent on knowledge acquisition, experience and
necessity development, thus making it more likely that young employees have higher scores.

Theoretical and Methodological Contributions

The present study presents some contributions to the theoretical development of the literature on entrepreneurs’ characteristics. More specifically, it proposes a theoretical entrepreneurial potential model, which was tested on one university student sample and one young employee sample. The main theoretical contribution refers to the suggestion of a model which results from the convergence of the distinctive psychological dimensions evidenced in the literature.

The research into the entrepreneurial personality (Chell, 2008) has progressively changed the focus from a simple description of personality or psychological characteristics to predicting entrepreneurial behavior and potential assessment. In this sense, this article also provides a contribution to the operationalization of the entrepreneurial potential construct, with the validation of an instrument for assessment. Moreover, previous studies on entrepreneurial potential do not present a theoretical model of convergence, but only a description of the various psychological and social dimensions (for example, Raab, Stedham, and Neuner, 2005). The model of entrepreneurial potential developed by Krueger and Brazeal (1994) focuses on the antecedents of the venture development process and therefore presents itself at a level different from that presented here.

This study confirms the importance of individual characteristics and skills included in the entrepreneurial potential model, contributing to the strengthening of prior empirical results and comparisons with theoretical propositions. For example, Baron and Markman (2000) argue that social skills are highly important in the
effectiveness of the behavior of the entrepreneur, and the present data support that proposition. The previous results on entrepreneurial self-efficacy corroborate the empirical studies by Chen, Greene and Crick (1998) and McGee, Peterson, Mueller and Sequeira (2009). However, this study goes beyond describing the importance of each characteristic of a singular way, since it presents a theoretical model integrating the various features.

For the methodological contributions, this study tested an assessment instrument for the entrepreneurial potential whose results appear to be important for future empirical research. The need to develop assessment tools with cultural validation has been highlighted in research on entrepreneurship (for example, Davidson, 2000). This paper also presents the Entrepreneurial Potential Index (EPI) which allows each individual position to be assessed within a scale that measures the potential to be an entrepreneur, according to a consistent theoretical model. The construction of indices of measurement has also been evidenced in the literature as a requirement for the development of the theoretical framework on entrepreneurship (Rumelt, 2005).

Limitations and Practical Implications

Despite the contributions made by this article, it also presents some limitations. More specifically, in the university student sample only four areas of science were assessed, which means that many other training areas, such as the artistic fields still need to be addressed. It will be interesting in future research to include samples from other areas, thus enabling the mapping of the entrepreneurial potential of students by field of training. Concerning the employee sample, only a sample of young people was measured, leaving the patterns of entrepreneurial potential for workers with greater experience still to be explored. It is further crucial to analyze the results of
entrepreneurs. This would be a baseline benchmark for other groups. In addition, tests should be developed that focus on incremental and differential validity, which is particularly critical in the selection procedures (Kline, 1993).

Regarding practical implications, the Inventory (EPAI) can establish itself as a tool of high value to the community, since it allows students, teachers, academics and financial funders of projects to assess the level of entrepreneurial potential as well as the dimensions that need to be developed. Since entrepreneurial potential is mostly composed of skills and competencies, it appears that there is the possibility of designing specific training to develop these competencies. In this sense, the EPAI helps to identify skills and competencies requiring development and training in a group of students. This is crucial to the universities, and allows training courses in entrepreneurship to be designed to fit to the needs of students. Thus, the EPAI becomes of vital importance to the design of or adjustment to the curriculum, for diagnosing the dimensions in which students have the greatest difficulty, and in signaling the need for skills development.

The Entrepreneurial Potential Index is presented as a tool that also has important practical implications. The direct measurement of entrepreneurial potential allows us to place an individual on a scale of intuitive understanding, thus enabling the comparison between different potential entrepreneurs and help in the investment decision making and / or the formation of entrepreneurial teams.

Against a background of economic and social crisis, entrepreneurship presents itself increasingly as a solution for self-employment (for example, Ashcroft, Holden, and Low, 2009; De Nardi and Villamil, 2009). In this sense, Entrepreneurial Potential Assessment Inventory (EPAI) and the Entrepreneurial Potential Index (EPI) can play a critical role in the early stages of the entrepreneurial process: the individual's motivation
and the assessment of skills critical to the development of entrepreneurial business success.

References


How to assess the entrepreneurial potential?

Introduction and Purpose

More than fifty years after the first contributions of Joseph Schumpeter (1934), the entrepreneurship research is becoming a more stable field, with his own theoretical, empirical and methodological debates (e.g. Connelly, Ireland, Reutzel, & Coombs, 2010). However, there are still some theoretical, empirical and practical aspects that require deeper research, mainly having in mind the explanation of the processes that contribute to the success of entrepreneurship programs and the entrepreneurial potential assessment. Nevertheless, the broad empirical and theoretical attempts and the entrepreneurial programs, the knowledge about the operationalization and measurement of the entrepreneurial potential is still scarce and poorly systematized.

The present study presents a tested proposal of an entrepreneurial potential index and its assessment. Thus, this paper (a) presents a theoretical model regarding entrepreneurial potential index; (b) empirically tests the theoretical model on two samples: one composed by university students and the other composed by postgraduate trainees; (c) validates the Entrepreneurial Potential Assessment Inventory (EPAI); and (d) presents the Entrepreneurial Potential Index (EPI) results.

There are many studies on the intention to launch a venture and on the entrepreneurial potential. However, there are evident theoretical gaps and a clear necessity to develop an assessment instrument. More specifically, it is evidenced that researchers apply different assessment methodologies on the intention to launch a new venture or on entrepreneurial potential, presenting different operationalizations and weak consistent validation of the theoretical constructs. (e.g. Gird, & Bagraim, 2009).
Departing from the literature evidence (Baum, Frese, Baron & Katz, 2007; Baron & Locke, 2004; McGee, Peterson, Mueller & Sequeira, 2009; Lumpkin, Cogliser, & Schneider, 2009) it is possible to clarify the entrepreneurial potential construct on four dimensions: (a) entrepreneurial motivations; (b) psychological competencies; (c) social competencies; and (d) management competencies.

The entrepreneurial motivations have been identified on literature as one of the main predictor of new ventures success (Baum, Locke & Smith, 2001) and express the focused and directed strength towards the entrepreneurial activity (e.g. Locke & Baum, 2007). The psychological competencies refer to the broad group of skills and attributes which characterize the individuals (e.g., Chell, 2008). The social competencies show refer to the individual capacity to interact efficiently with the others (e.g., Baron, 2000). The management competencies are defined by the basic and transversal competencies on business management (e.g., Baum, Locke & Smith, 2001).

**Methodology and Main Results**

Departing from the entrepreneurial potential theoretical model we built an assessment questionnaire with 33 items accordingly to the psychometric literature recommendations (e.g., Kline, 1993) - the Entrepreneurial Potential Assessment Inventory (EPAI). We tested the questionnaire on two samples: one sample of 580 university students and another on 552 postgraduate trainees.

The confirmatory factor analysis conducted with AMOS 17.0 evidenced good fit indexes on the university students samples ($\chi^2 = 785.60; gl = 454; p < 0.01; \chi^2/df = 1.73; CFI = 0.90; RMSEA = 0.04; SRMR = 0.05$) and on the postgraduate trainees sample ($\chi^2 = 1090.38; gl = 454; p < 0.01; \chi^2/df = 2.40; CFI = 0.90; RMSEA = 0.04; SRMR = 0.04$). Moreover, the multi-group confirmatory factor analysis evidence also good fit indexes ($\chi^2 = 1594.32; gl =$
908; p < 0,01; \chi^2/df = 1,76; CFI = 0,89; RMSEA = 0,03), evidencing that the entrepreneurial potential construct is operationalized by the EPAI.

The results evidence that there are significant statistically differences among the university students and the postgraduate trainees on the entrepreneurial motivation \( (F(4;1127) = 18,59, \ p < 0,01) \), psychological competencies \( (F(4;1127)=10,55, \ p < 0,05) \), social competencies \( (F(4;1127)=33,55, \ p < 0,01) \) and management competencies \( (F(4;1127) = 17,22, \ p < 0,01) \).

The validation of the entrepreneurial potential construct through the Entrepreneurial Potential Inventory (EPAI) opens new insights on the development of the Entrepreneurial Potential Index (EPI). Thus, the EPI is composed by the four second-order dimensions on the potential entrepreneurial construct: the entrepreneurial motivation (EM); the psychological competencies (PC); the social competencies (SC); and the management competencies (MC). Accordingly to the literature review and the present empirical evidences, the EPAI is operationalized through the following expression:

(1) \[ \text{EPAI} = (PC + SC) \times MC \times EM^2 \]

The EPAI emerges as an entrepreneurial potential quantification tool. Accordingly to the psychometric literature suggestions, standardized results with mean 50 and standard deviation 10 were computed (e.g., Laveault & Grégoire, 2002; Kline, 1993). Thus, 5 categories were developed: a very low entrepreneurial potential, a low entrepreneurial potential, a medium entrepreneurial potential, a high entrepreneurial potential and a very high entrepreneurial potential. The results on the two samples were analyzed and evidence that the postgraduate trainees have a significant greater EPAI than the university students \( (M_{\text{trainees}} = 50,9; \text{DP}_{\text{trainees}} = 10,30; M_{\text{students}} = 48,5; \text{DP}_{\text{students}} = 9,9) \).
Theoretical, methodological and practical implications

Theoretically, this paper presents important contributions on the entrepreneurs’ characteristic field, proposing an operationalization of the entrepreneurial potential, converging the previous literature evidences on an integrated model. Methodologically, this paper presents an empirical validation on an entrepreneurial potential assessment tool. Moreover, it presents an index which allows to identify the relative positioning of an individual regarding his/her entrepreneurial potential. Considering the practical implications, the present paper presents two important outputs: the EPAI and the EPI. These tools are important to include on training and entrepreneurship promotion programs.
Transitioning from Entrepreneurial to Professionally Managed Firms in Sub-Saharan Africa: Lessons from South Africa’s Economy

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Abstract Summary:
Small businesses are incontestably important in generating economic growth, employment and new ideas. In South Africa, 73% of workers are employed by firms with less than 50 employees, and 45% of all employees work in firms with less than 10 employees. Nonetheless, many small firms in Sub-Saharan Africa (SSA) remain in the informal sector - unable to transition from entrepreneurial to professional management. By utilizing research on 300 small businesses in South Africa and research on 12 other mid-income economies in SSA, this paper recommends strategies and policy initiatives that could be adopted to ease this transition in the region.

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Transitioning from Entrepreneurial to Professionally Managed Firms in Sub-Saharan Africa:

Lessons from South Africa’s Economy

A. BACKGROUND:
The World Bank defines Small and Medium Enterprises (SMEs) by the number of employees. While micro-enterprises are those with fewer than 10 employees, small enterprises are those with 10–50 employees and medium-sized businesses are those with 50–100 employees (Turner, 2008). Some authorities simply classify micro-enterprises as small enterprises. Small businesses are undeniably important in helping drive economic growth, creating employment, and being sources of innovation and new ideas both in developed and developing economies. In fact, the small business sector is the heart and lifeblood of many economies around the world (SBP, 2009). For example, nearly 80% of firms in Congo have fewer than five workers. The country has 2,100 firms in the formal and 10,000 in the informal sector. Nigeria’s SMEs account for some 95% of formal manufacturing activity and 70% of industrial jobs in the country. In 2003, small businesses in South Africa provided more than 55% of total employment and 22% of GDP (Kauffmann, 2005). Overall, in South Africa, about 73% of workers are employed by firms with less than 50 employees, and 45% of all employed people in the country work in firms with less than 10 employees. In Zambia, around 80% of all economic activities occur in the informal sector (Stern, 2005). Even in developed economies, the small business sector is regarded as the driving force of economic growth. For example, in Canada, over the past 35 years, the SME sector has experienced significant growth and accounts for almost 50% of Canada’s economy (Kerimova, 2007).

Despite their significant contribution to the economy, the transformation of entrepreneurial small firms and micro-enterprises into large professionally managed firms is still necessary in order for
these firms to upgrade their products, processes, quality levels, productivity and innovation. This growth is aimed at enabling these firms to integrate into local, national, and international value chains – to become profitable, productive and performance-driven enterprises. Many small firms continue to experience barriers to this transformation. The estimated failure rate of small, medium and micro enterprises in average economies around the world remains between 70% and 80%. Less than 50% of newly established businesses throughout the world survive beyond five years (Brink, 2003). Barriers encountered by these small businesses can be described amongst others as being environmental, financial or managerial in nature.

Sub-Saharan Africa (SSA)'s economy thrives on SMEs. Only a few countries on the continent have adopted sound economic policies and initiatives to foster an environment for its SMEs to easily transition from formal/entrepreneurial to formal/professional management. As a result, some of these countries have developed to become Middle-Income Countries (MICs) in SSA. Around 2007, there were 13 MICs in SSA, which although they hosted only 13% of the total SSA’s population, accounted for 66% of all incomes earned in the region. Seven of these MICs were in the lower middle income country group (per capita incomes between $826 and $3255). They included Angola, Cameroon, Cape Verde, Congo Republic, Lesotho, Namibia and Swaziland. The other six were in the upper middle income countries group. These included Botswana, Equatorial Guinea, Gabon, Mauritius, Seychelles and South Africa. With the exception of South Africa and Mauritius, none these countries were in the MIC category in 1960. Out of the 13 countries, seven have acquired their current status largely on account of their mineral wealth, including oil. The rest of the countries (35), which host 87% of all Sub-Saharan Africans fall in the low income country category and account for one third of all income generated in the region (Ndulu, et al., 2007, p. 3).
The disparity between most of the 13 MICs and the 35 countries in SSA can be partly explained by the divergent strategies pursued and the policy disposition adopted by countries with very similar opportunities. Different growth experiences yielded different outcomes. For example, both Botswana and Zambia are landlocked resource rich countries. On the other hand, both Mauritius and Côte d’Ivoire are coastal resource poor countries and initially both primary commodity dependent. However, by adopting sound long term strategies and economic policies to exploit their similar opportunities, Botswana and Mauritius ended up in the upper MICs. Zambia’s and Côte d’Ivoire’s per capita income hardly progressed relative to their levels in 1960 due to their poor economic strategies and policies (Ndulu, et al., 2007, p. 6). As a result, all poor countries in SSA need to emulate the economic paths adopted by most of the MICs in SSA.

B. OBJECTIVES:

The objective of this paper is to establish key environmental, financial, managerial and other factors that inhibit the transformation of entrepreneurially managed firms to professionally managed firms in South Africa. Findings in South Africa are incorporated with research findings in the other 12 MICs in SSA to recommend policies and strategies that would help small firms in SSA to easily transition from informal/entrepreneurial management sector to formal/professional management sector. South Africa forms an ideal setting for this study due to its unique economic characteristics that exist in all countries of SSA. While South Africa is one of the wealthiest countries in Africa (with some highly developed sectors analogous to those in G-8 countries), it is also a classic “dual economy,” with a sophisticated urban economy alongside many poorer, lower-capacity rural areas that have many informal firms. South Africa’s informal sector is characterized by undercapitalized and overly-labor intensive firms (Coolidge, 2008). SSA’s underdeveloped economies exhibit conditions that are typical in South Africa. For example, Zambia has an economy that is typical of
SSA, characterized by low productivity, little diversification outside of traditional activities (i.e. highly agricultural, small manufacturing base, etc.) and also with high levels of informality. Rwanda, on the other hand, is a post-conflict country with much of the economic base in the process of recovery and a high level of informality (Stern, 2005). With South Africa having transitioned from a state of economic inequalities and conflicts associated with apartheid to a state of relative equal opportunities and rapid economic development, many post-conflict countries can emulate South Africa’s economic growth path.

C. METHODOLOGY:

Survey Design:

This study on small businesses in South Africa was conducted by a team of researchers that included Annekie Brink, Michael Cant and Andre Ligthelm, with the objective of establishing to what extent owners/managers of small businesses in a typical South African setting experienced constraints that negatively influenced the success of their small businesses. A questionnaire was administered to 300 small businesses to solicit responses, using judgment sampling (Brink, 2003). Small businesses were selected for the study since most countries in SSA tend to have more small businesses than medium-sized businesses in their often large informal sectors. Thus, research findings in South Africa would be fairly compared to findings in other SSA countries while making policy proposal and recommendations.

To ensure the reliability of the data, only entrepreneurs with a reasonable level of sophistication and understanding of concepts such as interest rates, exchange rates and inflation were selected to participate in the survey. To ensure that only bona fide business participated in the survey, other requirements for participation included the small business: having compiled an annual budget,
operating from a demarcated business area, and occupying a permanent structure. Micro-businesses operating in the informal economy were excluded from the survey, mostly due to possible lack of accurately recorded data. Also, to ensure that only small businesses were surveyed, businesses with more than 50 full-time employees were excluded from the survey.

A structured and pre-tested questionnaire was administered to participants by 12 well-trained interviewers who lived in the survey areas, knew the areas well, and knew the locations of businesses well. The questionnaire included a socio-demographic information section that gathered information such as business ownership, period of ownership, management qualifications, number of full-time employees and annual turnover. The actually survey section consisted of 51 items, divided into seven categories, five representing problem areas faced by the small business according to various management functions (marketing, finance etc). Several statements relating to the various areas were phrased with a possible response continuum linked to a Likert-style five-point scale (1 = strongly disagree to 5 = strongly agree). In the absence of a sample frame, a judgmental sample was conducted among small business owners/managers. The survey was conducted in six identified areas, namely Soweto, Tembisa, Mamelodi, Soshanguve/Mabopade, Johannesburg’s Central Business District (CBD) and the Pretoria’s CBD. To ensure equal representation, 50 respondents were selected from each area, thus a totaling 300 respondents.

Interviewers were instructed to complete the 50 questionnaires in each area according to the following sectorial distribution: retailers (18); services (personal, social and community,18); manufacturing/repairs (6); other (wholesalers, construction, transport etc) (8). Substitution was only allowed after consultation with the researchers. As a result, limited divergence occurred from the initial 50 questionnaires planned in each area, with numbers ranging from 59 in Tembisa to 51
in Soshanguve/ Mabopabne and Johannesburg CBD. The processing of data, ranging from checking to coding, data capturing and analysis was undertaken by the Bureau of Market Research of the University of South Africa.

**Profiling Survey Population:**

The survey population portrayed the following characteristics:

- Businesses with a reasonable level of sophistication were included in the sample. Only businesses operating from demarcated business premises, occupying a permanent structure and compiling an annual budget were selected.
- Only business owners or managers were selected as respondents. Almost two thirds (64.5 %) of the respondents acted as managers or had owned their businesses for more than three years.
- One in every four (24.6 %) respondents had a formal management qualification or certificate.
- Exactly half (50.8 %) the businesses operated as sole ownership enterprises while the rest were partnerships (12.8 %), private companies (16.2 %) and close corporations (19.9 %).
- The average employment of respondent businesses amounted to 3.8 full-time employees in 2001.
- Almost four in every five businesses (79.1 %) reported a turnover of less than South Africa Rand (R) R500,000 for 2001. Only 7.1 % generated a turnover in excess of R1 million.
- Seven in every ten businesses (70.3 %) were owned or managed by Africans, 14.3 % by Asians, 4.0 % by coloreds and 11.3 % by whites.
- Two thirds of the questionnaires were completed in township areas and one third in the CBD areas of Pretoria and Johannesburg.

**D. SURVEY FINDINGS:**
The findings of the research are discussed under the factors that inhibit the transformation of entrepreneurially managed firms to professionally managed firms, which include macro environmental variables, marketing-related issues, management skills, management actions, human resource challenges and financial challenges.

**Macro Environmental Variables:**

The macro environmental variables which exerted the most marked influence on business success were crime, inflation, unemployment, interest rates and exchange rates. The percentages of businesses that agreed or strongly agreed in this regard are as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral Agree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rates</td>
<td>3.7%</td>
<td>9.0%</td>
<td>16.1%</td>
<td>30.1%</td>
<td>41.1%</td>
<td>100</td>
</tr>
<tr>
<td>Exchange rates</td>
<td>4.0%</td>
<td>9.0%</td>
<td>20.4%</td>
<td>34.4%</td>
<td>32.1%</td>
<td>100</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.7%</td>
<td>6.7%</td>
<td>14.0%</td>
<td>31.4%</td>
<td>45.2%</td>
<td>100</td>
</tr>
<tr>
<td>Unemployment</td>
<td>4.0%</td>
<td>6.0%</td>
<td>13.7%</td>
<td>27.1%</td>
<td>49.2%</td>
<td>100</td>
</tr>
<tr>
<td>Crime</td>
<td>4.3%</td>
<td>7.4%</td>
<td>6.4%</td>
<td>20.7%</td>
<td>61.2%</td>
<td>100</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>18.1%</td>
<td>15.4%</td>
<td>38.3%</td>
<td>11.1%</td>
<td>17.1%</td>
<td>100</td>
</tr>
<tr>
<td>Changing techniques</td>
<td>20.8%</td>
<td>21.1%</td>
<td>18.5%</td>
<td>24.5%</td>
<td>15.1%</td>
<td>100</td>
</tr>
<tr>
<td>Government legislation</td>
<td>11.3%</td>
<td>20.3%</td>
<td>29.6%</td>
<td>21.3%</td>
<td>17.6%</td>
<td>100</td>
</tr>
</tbody>
</table>

However, HIV/AIDS (28.2%), new government legislation (38.9%) and rapidly changing techniques (39.6%) were perceived as having the least influence on business success.

**Marketing-Related Issues:**

Increased competition was the major marketing-related issue faced by the respondent businesses as having a negative influence on the success of the businesses, as 68.4% agreed or strongly agreed with this finding. Increased competition was also the single factors with the highest percentage of ‘strongly agree’ responses. With regard to the low demand for products or services, 43.5% regarded it as a major problem. This finding corroborates the literature that new competitors and insufficient
demand hinder small business growth and expansion. Respondents with management qualifications tended to be more in agreement with the negative impact of increased competition, lack of knowledge of competitors and ineffective marketing on the success of their businesses, than those without qualifications. This observation may suggest that better insight into marketing-related issues is an important factor for business success.

*Management Skills:*

The majority of the respondents did not see management training as lacking and thus negatively influencing their businesses. This reaction might be explained as a form of response bias where respondents seek social approval in the eyes of the interviewer. Nonetheless, a larger percentage of those without management qualifications agreed that the lack of management training and skills impacted negatively on the success of their businesses.

*Management Actions:*

The lack of management skills did not present a serious problem to the success of businesses. Management actions generally refer to the tasks of planning, organizing, leading, coordinating and controlling the business. The majority of business actions identified in the questionnaire were perceived by respondents as important for ensuring business success. The percentage of businesses in agreement (“agree” and “strongly agree”) with the various management actions were as follows:

| Change is an integral part of running a business | 81.3 |
| Failure is a valuable learning experience | 72.7 |
| Time is spent more effectively if I plan better | 71.9 |
| Involve employees in planning and decision making | 68.4 |
| Set time apart to plan and prioritise | 68.0 |
| Prefer to do most of the work to be in control of business | 60.9 |
Respondents in possession of management qualifications constantly attached greater priority to the execution of management actions such as effective planning, organizing, leading and controlling of the business. Thus, management training not only transfers management skills to learners but also reinforces the lateral perception that the application of skills contributes to business success.

**Human Resource Challenges:**

The two most serious human resource challenges mentioned by approximately one in every three respondents (i.e. those who ‘agree’ and ‘strongly agree’ with the statements) were the introduction of the new labor laws (35.6 %) and the inability to attract and find suitable staff (32.6 %). The least important of the human resource issues were poor labor relations (19.8 %), poor staff planning (20.6 %), high labor turnover (22.8 %), poorly trained employees (25.4 %) and low labor productivity (26.7 %).

**Financial Challenges:**

Financial problems having the most widespread impact on businesses were difficulty in obtaining finance/credit (53.9 % of the respondents ‘agree’ or ‘strongly agree’) followed by high operating expenses (51.8 %). Interestingly, owners/managers with a management qualification experienced fewer financial problems than those without management qualifications.

**E. CONCLUSION:**

Overall, key findings of the study revealed that majority of the small firms in South Africa fail to transition to large professionally-managed firms, mostly due to a combination of environmental (e.g. security, governmental policies, etc.), financial (e.g. access to capital, infrastructural resources, etc.) and managerial factors (e.g. skills and training talent team). These factors confine firms to a
state of those characterized by informal management, centralized decision-making, over-dependence on one or two key personnel, and a paternalistic atmosphere; rather than have them transition to a state of those characterized by a functional structure, delegation of authority to subordinate managers, formal information analysis, formal communication systems, stable short and long-term strategies, and flexibility and interchangeability among organizational components. These findings generally explain why South Africa’s economy continues to heavily dominated by small and usually informal businesses, despite the country having highly developed structures to transition these businesses into large professionally-managed enterprises. Policies and interventions aimed at addressing challenges faced by small businesses in South Africa can be adapted to other economies in SSA to rapidly stimulate the region’s economic growth.

F. IMPLICATIONS:

These research findings on small businesses in South Africa compared to existing research on MICs and other poor economies in SSA reveal that the development of the private sector varies greatly throughout Africa. SMEs are flourishing in South Africa, Mauritius and North Africa, mostly due to fairly modern financial systems and clear government policies that favor the private enterprise. Elsewhere the rise of a small-business class has been hindered by political instability and strong dependence on a few raw materials. In the Democratic Republic of Congo, for example, most SMEs went bankrupt in the 1990s – as a result of looting in 1993 and 1996, during the civil war. In Congo, Equatorial Guinea, Gabon and Chad, the dominance of oil has slowed the emergence of non-oil businesses. In Nigeria, while SMEs account for about 95% of the formal manufacturing activity, insecurity, corruption and poor infrastructure prevent them from becoming key motors of Nigeria’s economic growth (Kauffmann, 2005).
Nonetheless, small businesses can undertake internal strategic policies and initiatives, while countries can undertake external strategic policies and initiatives to grow from informal to formal sectors of their respective economies. Along the process, these firms will most likely transition from entrepreneurial to professional management. These policies and initiatives are vital if SSA expects to reduce its abject poverty and transition all its countries into MICs or developed economies. Although the region currently accounts for only 10% of the world’s population, it accommodates 30% of the world’s poor. One in two Africans (or 300 million people) is poor, spending less than $1 a day on basic necessities of life (Ndulu, et al., 2007, p. 4). Nonetheless, it should be noted that each country’s situation is unique and requires specific analysis of constraints and opportunities, in order to devise viable economic growth strategies and policy interventions that are unique to each country’s economy. Thus, some of the policy and initiative recommendations discussed below may need to be modified and adapted to each country’s situation.

INTERNAL STRATEGIC POLICIES & INITIATIVES:

Internal strategic policies and initiatives are measures that are adopted internally by businesses to expand their enterprises from informal/entrepreneurially-managed firms to formal/professionally-managed enterprises. Businesses usually have strong control over devising and implementing these measures.

Entrepreneurial vs. Professional Management Styles:

The informal/entrepreneurial management style is usually an informal one-person show that is driven by the entrepreneur/owner’s vision, intuition, creativity and risk-taking. It is highly-centralized in decision-making. On the other hand, the formal/professional management style is
more systematic, and is characterized by planning and delegation of power to employees. All employees feel like team players. This later style is more conformist and drives the business with caution rather than risk-taking. A firm can prepare for professional management if it trains or hires employees with managerial skills and talents that are key to its success.

Detection of the Need to Transition to Professional Management:

Initial growth of small businesses often plateaus because of a lack of corresponding growth in basic management skills. In order to grow their businesses to large professionally-managed enterprises, entrepreneurs must shift their thinking from tactical and operational management, to strategic and supervisory management. They must ensure that growth in sales and employees is accompanied by corresponding growth in management skills (Normand, 2010). An entrepreneurial firm can detect the need to transform to professional management if it feels overwhelmed with management activities; it feels unqualified to handle the many issues surrounding its growth strategy such as marketing, finance and human resource management; it experiences financial strain caused by growth; communication in the firm and co-ordination of operations become increasingly difficult; motivation of employees become increasingly difficult; it experiences problems with customers or suppliers due to backlog of work orders; it experiences mistakes and it experiences a decline in its performance (Giampa, 2005).

Managing Successful Transition to Professional Management:

The life-cycle of a business is generally characterized by four stages of growth that transitions it from the SME category to a large corporation. These stages are: start-up, growth, maturity and decline. In order to successfully manage transition from entrepreneurial to professional management while avoiding the decline stage, the entrepreneur needs to set organizational policies
and procedures in place to guide the actions of the organization. Such guidelines might include production procedures, and marketing and sales tactics that are driven by sound research and development. At this stage, the focus of the management team becomes centered on coordination of business activities, rather than on managing every aspect of business operation. Also, decision-making becomes decentralized through creation of job descriptions and departments to handle specific tasks, and creation of organizational charts with clear reporting for all employees. Employees will usually need to adapt to the organizational structure and culture. Providing adequate training to employees, communicating openly about company changes, and involving employees in the change process will usually enhance this adaptation and minimize employee resistance to the transition. As the firm grows, it may choose to go public through raising equity capital. After it goes public, it may mature by increasing its net worth especially when its stock value appreciates. At this stage, many firms are usually highly productive, performance-driven, and integrated into local, national, and international economic value chains.

**EXTERNAL OPERATIONAL STRATEGIES & POLICY INITIATIVES:**

External strategies and policy initiatives are measures undertaken by countries and the wider business communities to create an environment that fosters the growth and expansion of SMEs from informal/entrepreneurial operations to formal/professionally-managed enterprises. Individual businesses usually have less control over these initiatives. Governments, business communities and other influential stakeholders usually have major control over these measures, and usually succeed if they work in a joint and concerted effort. Some of these measures that are unique to SSA include the following:

1. **Minimize Geographical Disadvantages:**
The transition of firms from informal/entrepreneurial firms to large formal professionally-managed firms in Africa is usually constrained by the continent’s geographical disadvantages. Economic isolation is more acute in Sub-Saharan Africa, where 31% of the countries are landlocked, compared to only 12% of all the other developing countries. Nearly 40% of the SSA population lives in these landlocked countries, with high transportation costs and poor trade facilitation (Ndulu, et al., 2007, p. 89). Long distances and being landlocked limit a country’s access to international markets, hinder its ability to exploit economies of scale, lower its production efficiency, and ultimately reduce its economic growth. Besides facing significant economic isolation, SSA is a highly fragmented region. For a given geographic area, the region has the highest number of countries, with each country sharing borders with four neighbors on average, often with different trade and macroeconomic policy regimes. This fragmentation got worse after independence for most countries, with the break-up of federations, customs unions, and currency zones – as countries established their own trade regimes, central banks, and immigration policies and systems. This process fragmented policy frameworks, fractured transportation networks, and led to more transshipments and longer transit times, thus making transacting business across the region’s most borders more cumbersome (Ndulu, et al., 2007, p. 90).

Thus, Africa needs to invest heavily in infrastructure to support the growth of its SMEs. It is estimated that Sub-Saharan African countries need $18 billion a year in infrastructure financing in order to achieve the much higher 7% economic growth target needed to halve extreme poverty in the region in about 10 years. Region-wide infrastructure development is needed to link up the isolated and fragmented countries of Africa and their remotely dispersed entrepreneurs. For landlocked countries, investment in transport links to ports is critical. This initiative involves not only roads and railroads, but dedicated port facilities and improvement in facilitation at cross-
border checkpoints (Ndulu, et al., 2007, p. 145-8). Also, the continent needs to devise cohesive economic policies to integrate its fragmented markets.

2. Initiate Business-Friendly Tax Policies:

Most small firms in Africa choose to stay in the informal sector if they can because the perceived benefits outweigh the perceived costs. First, these firms rarely see their tax contributions at work in the form of government services. Second, many African entrepreneurs fear that once they formalize their businesses their governments will over-regulate their business. Third, business owners complain that tax compliance costs (i.e. cost and enormous amount of time involved in preparing, handling and submitting required tax forms to tax authorities) add a serious burden to their operations (Coolidge, 2008). For example, Cameroonian businesses pay a hefty 52% of profits in tax, make an average of 41 different payments to the authorities and spend about 1,400 hours on tax preparation, filing and payments (Ellis, 2010). Thus, if compliance costs (both financial and time) are added into a firm’s cost-benefit analysis of paying taxes, the disincentive to comply with tax requirements becomes even stronger. As a result, many entrepreneurs with promising business ideas deliberately choose to remain small and operate off the books in the informal sector.

Nonetheless, there are compelling reasons for the small entrepreneur and the government to join the tax net. On the SMEs’ side, participating in a tax regime brings a firm into the formal sector, and allows it access to formal credit markets, government procurement and export markets. On the government’s side, by supporting firms to fully enter the formal sector through registering for and paying taxes, government promotes a culture of compliance and sets the stage for the firm to grow and become a bigger taxpayer. Also, firms in the formal sector are more likely to comply with all other regulations and official obligations than those in the informal sector (Stern, 2005).
Additionally, informal businesses do not contribute to the tax revenue of the state, which forces governments to raise taxes, thus overburdening legitimate formal businesses. The lost tax revenues from the informal sector are not available for the many critical infrastructure improvements needed to further the economic development of these nations (IBM, 2010, p. 32). As a result, governments in SSA need to make their taxation systems more appealing to SMEs by making the taxation system less costly and cumbersome, and utilizing the recouped tax dollars to offer services that support the growth of SMEs.

3. Increase Access to Credit:

While access to credit is critical to the sustainability and growth of any business, many African entrepreneurs lack access to this key financial resource. The lending environment across Africa is generally characterized by poor credit culture, poor contract enforcement and lack of protection of creditor rights. Coupled with a lack of collateral and inability for Africa’s entrepreneurs to prove creditworthiness, creditors usually have higher perception of risk and raise finance premiums for borrowers, a situation that further inhibits access to credit by many poor entrepreneurs (Ndulu, et al., 2007, p. 120). Consequently, many SMEs fail to secure finances to grow and become large professionally-managed enterprises. In order to increase access to credit for SMEs, countries need to create or support credit bureaus that collect trade/credit payment data from the informal sector and fairly share this information with the lending financial sector. Data from SMEs in the informal sector (data not traditionally reported) can increase lending by large creditors to these SMEs. In the sophisticated and well-capitalized financial sectors like that for South Africa, such additional data can enable financial institutions to reach the country’s traditionally underfinanced enterprises. In the underdeveloped financial sectors of other countries in SSA, such information can create opportunities for informal sectors to easily become formal.
4. Resolve Conflicts and Political Instability Peacefully:

Since the 1960’s Africa has experienced a debilitating descent of states into persistent internal conflicts. In fact, conflicts are now arguably the single most important contributor to poverty in Africa. For example, in 1999 Africa hosted more than 50% of the world’s conflicts. Instability not only escalated within countries but spilled over into neighboring states, resulting in catastrophic wars within and among countries. Africa’s conflicts are usually instigated by growing nationalism, ethnicity, abject poverty, lack of opportunities and corruption (Ndulu, et al., 2007, p. 110). Conflicts reduce economic growth by inhibiting investment in both physical and human capital, destroying existing business assets and infrastructure, and bringing economic activities to a halt. Political instability, on the other hand, even if it doesn’t lead to conflict creates uncertainty for investors, raises the riskiness of investment, and discourages overall investment. As a result, SSA needs to settle its disputes through alternative peaceful means such as arbitration, negotiation, diplomacy and dialogue rather than through violent conflicts in order to create an investor-friendly environment for its SMEs to easily transition into large professionally managed firms.

5. Support Women Entrepreneurs:

The role of women in the economic development of Africa continues to be increasingly well documented. In Africa, women account for more than 60% of the rural labor force, and contribute up to 80% of food production. Also, more than 80% of these women in the rural labor force are working, unregistered and unrecognized by the government, in the informal sector (IBM, 2010, p. 38). Despite their obvious contribution to Africa’s development, women continue to face cultural barriers to economic empowerment and progress. For instance, many leadership roles in African societies remain male-dominated. Consequently, women’s creativity, leadership skills, talents and
capabilities, and full participation in economic growth remain suppressed. In addition, since many women don’t have property ownership rights, female entrepreneurs usually lack collateral to secure financing to expand their SMEs into large professionally-managed firms.

In order to fully benefit from the dynamism that the feminine aspect brings to the economy and stimulate its fast economic growth, SSA needs to employ the full participation of women at all stages of its economic growth. The good news is that significant progress is being made to empower African women in the business world. More than ever, African women are seeking the experience, tools, technology, and role models to make their business visions a reality. Also, 85% of African microfinance clients are women (IBM, 2010, p. 41).

6. Improve Access to Tertiary Education:

Research data shows that for African entrepreneurs, education is very important in determining the size at which they entrepreneurs start their entrepreneurial ventures. African entrepreneurs with a university education generally start much larger enterprises compared to those that do not have a university degree. The completion of a university degree generally reflects a higher ability and accumulation of managerial skills that are responsible for entrepreneurial success. Also, the university degree enables access to a network of other business professionals that is useful for the expansion and success of the businesses (Ndulu, et al., 2007, p. 68). On the other hand, many of Africa’s SMEs owners lack formal education, a condition that usually condemns them to informal entrepreneurial managers. Thus, if Africa expects increase managers for its professionally-managed firms, it needs to invest in tertiary education and encourage the pursuit of entrepreneurship in academia.
In the overall analysis, many countries in SSA need to emulate the economic growth strategies of mid-income economies if they expect to become economically prosperous. For example, since its independence in 1966, Botswana has achieved a remarkable growth in economy, sociopolitical stability, and education. Its current political administration, which is one of the leading democratic systems in the world, is based on equity in the distribution of resource and services. In addition, the government of Botswana has designed various diversification programs and policies for its economic activities, and has prioritized its focus on the promotion of the development of SMEs (Temtime, 2004). These strategic and policy measures have enabled Botswana to easily position itself as a mid-income economy in SSA. These countries also need to combat their unique constraints to economic growth – most of which are largely historical, institutional and policy-related. These constraints increase investment risks, raise transaction costs, and limit business growth and productivity.
BIBLIOGRAPHY:


MAKING IT HAPPEN – ENTREPRENEURSHIP ACROSS THE CAMPUS.
PERSPECTIVES FROM ONE UNIVERSITY ON DELIVERING
ENTREPRENEURSHIP EDUCATION TO BUSINESS AND NON-BUSINESS
STUDENTS.

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Abstract

Entrepreneurship across the campus…Interdisciplinary Entrepreneurship… What do these mean? How do you design a program? How do you develop curriculum? How do you find faculty to teach? So many questions. What about answer?

This workshop will articulate the process of conceiving and developing an entrepreneurship curriculum across Webster University. Participants will learn about the interworking of one university’s efforts to bring entrepreneurship education to its students. This presentation will focus on Webster University’s undergraduate Certificate in Entrepreneurship curriculum – and how the process has been extended to numerous academic disciplines. Time will be provided for dialog between the panel and audience members.

Key Words
Entrepreneurship in the Arts; Entrepreneurship; Curriculum design and delivery; Music Business; Music Entrepreneurship; Cross-campus entrepreneurship; Partnership between Business School and non-business programs; What to do and not to do; Professional Development; Career development;
INNOVATION: STRATEGY THAT CONTRIBUTES TO ASSURE GROWTH AND DEVELOPMENT IN MICRO, SMALL AND MEDIUM FAMILY BUSINESS IN COLOMBIA.

Principal topic and Research Question (s)

Diverse authors have evaluated the impact of the innovation in the competitive development of the micro, small and medium companies, such RICARDIS (Reporting Intellectual Capital to Augment Research, Development and Innovation in SMEs) developed by the Commission of European Nations (2006), Beltran (2008), Gil (2002), Menkveld and Thurik (1999), Santarelli (1990), Damanpour (1991), COTEC Foundation for technology innovation (2004), Bueno (1986), Pujol (2005), Calabrese And Rolfo (1995) among others, who have found that innovation constitutes a basic factor for the companies’ growth, taking their investigations in the economic, social or technical dimension.

This research presents a characterization of the innovation and its economical impact in the micro, small and medium family companies in Colombia in a work with 396 organizations.

The results obtained present:

1. The impact of the innovation in the competitive performance of the SME´s family companies in Colombia.
2. The relation between innovation and the generation in charge of the family company.
3. The impact of the Regional Innovation Systems in the organizations
4. The main reasons that organizations have to carry on innovation activities.

5. The different types of innovation implemented at the companies.

6. The levels of investment that companies assign to the innovation activity.

7. The economical impact on sales and profits derived of innovation activity.

8. The stakeholders that participate on innovation activities.

9. The main obstacles that family companies have when develop innovation activities.

10. The knowledge level of companies about Colombian State credit lines for innovation activities.

This research try to contribute to business competitive development, by means of political formulation and promotion of the innovation, as Maloney and Perry suggest (2005).

Methodology / Key Preposition

With the purpose of determining the impact of Innovation and to know if this is a factor that contributes to the economic growth of the family SME’s in Colombia, the authors carry out a descriptive research with a statistical sample of 396 companies applying them an structured instrument (personal interview).

With the interest that this research had a representative statistically result of family business in Colombia, the authors worked with 5% confidence interval and 95% of confidence level to determine the sample size. To validate the hypothesis and the objectives of this research, they carried out statistical test of independence through contingency tables and factor analysis.
Contributions

This research contributes to:

In accordance with different research of Beltrán (2008), Pujol (2006), Rogers (1983), Well (1986), Santarelli (1990), Kleinschmidt and Cooper (1991), Damanpour (1991), Calabrese and Rolfo (1995), Menkveld and Thurik (1999), Gil (2002) the present research allowed to establish that the innovation constitutes a basic factor for the growth of the micro, small and medium family companies in Colombia. Of 396 analyzed companies, 57% have undertaken activities of innovation.

In accordance with Oslo Manual (2005), “Innovation is the implementation of a product (product or service) or new process or with a high degree of improvement, or a method of commercialization or new organization applied to the practices of business, to the place of work or to the external relations”, As an illustration they present four types of innovation: Innovation of product, of process, Innovation of “Marketing and Organizationl Innovation. At this research, the author could establish that in accordance with company size and specific characteristics they undertook different type of innovation, that contributed to his economic growth. In all cases the innovation types advanced in the same way of different categories contemplated in the Oslo Manual (2005).
Inside the companies the innovation process emerged by organization initiative and it comes reality with their own resources and they don’t know about Government politics to support business innovation.

In the same way the author established that companies that undertook innovations, increases its sales and profits at the periods of time analyzed, constituting the innovation a strategy that contributes to assure its growth and development.
Professional CEO, independent directors, innovation and family controlled firms’ performance

Dr. Mary Han

Dr. Nikhil Celly

Abstract

Our research addresses the importance of innovation to family controlled firms and proposes this can be achieved by outsiders in family controlled firms. We draw from the resource based view and dynamic capability literature to propose that professional CEOs directly impact the innovation and performance of family controlled firms. Further, we argue that their impact may be moderated by independent directors on the board. The higher the number of independent directors, the more positive the effect. Our study is among the first attempts to link the resource based view and corporate governance to family controlled firms innovation and continuity. Our testable propositions form a baseline for future research. Implications for theory and practice are discussed.

Worldwide family controlled firms generate and contribute to more than half of the world’s GDP. In 2001, Family Businesses magazine listed 116 family businesses in the world with over one billion revenue each. Such important economic engines as family controlled firms are facing extreme challenges as research shows that only 30% of US family firms survive into the second generation (Birley, 1986). In examining reasons for failure, research on family controlled firms and their survivability has focused on succession planning (Lee, Lim and Lim, 2003); family governance issues (Miller and Miller, 2006) and threat of imitation and strategic
responses of family influence (Sirmon, Arregle, Hitt and Webb, 2008) amongst others. However, little attention has been paid to an equally important factor, innovation or the lack of it to family controlled firms’ survival. More importantly, even less attention has been paid to linking how outsiders such as professional CEO and independent board members, play an important role in generating innovation and ultimately improving performance and continuity of family controlled firms.

Drawing from the resource based view and dynamic capability literature, our research aims to develop a theoretical model to explain how professional CEO is a specific resource of the family controlled firm and may positively influence innovation and continuity in the family controlled firm. We further explain the moderating effect of independent board members in the family controlled firms’ innovation and continuity. Our developed propositions contribute a baseline for future empirical studies in this important area of research. Positive impact of professional CEOs can be seen from many examples such as Ford Motor. The firm overcame a major shortcoming by hiring an outsider, a professional CEO, Allan Mulally after successive generations of family CEOs. Another example is IKEA’s founder, Ingvar Kamprad, who retired in 1986 after developing a Swedish firm into a worldwide phenomenon operating in 44 countries. Since 1982, the IKEA Group has
been owned by a foundation arranged by Kamprad. He set up a 7 member board, with only one person carrying his last name. The CEO and President, Anders Dahlvig, of the IKEA group is a professional CEO, not a family member (IKEA, 2009). IKEA has expanded new product lines and new markets ever since Dahlvig took over.

Family firms, we argue can suffer from a lack of innovation (or less innovation) than non-family firms. A monarch style founder, in Poza’s (2007) term means the founder who controls decision making, and never wants to release his crown. Boards dominated by family members, and overshadowing effects of the founder even after his/her exit are some of the other factors that contribute to the family controlled firms’ inertia and trap it in its past success, resulting in lack of innovation and risk discontinuity (Poza, 2007). This can directly lead to lower survival rates. Therefore, we develop a theoretical model to propose and depict a positive relationship between professional CEO and firms’ innovation, and hence its performance and continuity. The model also depicts an inverse relationship between too many ‘old time’ family board members and firms’ innovation and performance. We propose a positive moderator relationship between higher number of independent directors and innovation and performance of the family controlled firm (See Figure 1 for our theoretical model).
The contextualization of our model is that we characterize the family has at least 10 percent voting shares (Morck et al., 2005), is in its second generation, and is a publicly traded firm. In addition, we characterize the family controlled firm as being under the founder’s dominance (decision making). Further, we also characterize the family controlled firm has a few, if not too many close ties of the founder still on the board of directors. Further, we characterize professional CEOs by their 1) professional experience prior to managing the family controlled firm, 2) not being a family member. We characterize independent directors by their 1) not being a family member, 2) not a member of management, and 3) not having any ownership in the firm. We depict innovation in terms of new products and markets and performance as ROA and ROS necessary for sustainability and continuity of the family controlled firm (Morck and Yeung, 2004).

We argue that the professionalism of an outsider CEO and non family independent board members can bring in 1) professional emotion which is not attached unlike family members; 2) knowledge and experience that fill structural holes (Burt, 1992) and produce weak ties effect (Granovetter, 1973); 3) dynamical relationship with employees, family and shareholders; and 4) fresh perspective that is not stale based on the family’s historical view. Professional CEO’s years of
idiosyncratic knowledge, information and experience is very different from the family controlled firms’. The uniqueness of family knowledge and network ties coupled with the CEO’s idiosyncratic knowledge and network ties develops into a new set of network, knowledge base, and information pool. The professional CEO is hired based on his/her unique and specific resources that he can bring into the firm. We adopt the similar premise for independent director, except we contend that the number of these independent directors must be greater than old time family members on the board to have a positive moderating effect.

Our theoretical reasoning contributes to family business, resource based view, dynamic capability, entrepreneurship and corporate governance in several ways. First, our research is among the first attempt at linking outsiders (CEO and independent directors) to family controlled firms’ innovation and continuity. Second, our testable propositions provide a baseline for future empirical research which will bring fruitful and robust understanding for theory and practice. Finally, our theory helps research in family controlled firms to open up a new line of thinking in the area which is critical to survivability of family firms and economic development of society in general. In fact, our research is particularly important to entrepreneurship research as many entrepreneurs have neglected the importance of external knowledge,
information and experience for the firm’s innovation development, and thus the new venture’s continuity. Our research illustrates significant theoretical and practical implications to family controlled firms.

**Literature Review**

In this section we briefly review the two strategic management theories that have been most used to examine family firms, agency theory and resource based view (Chrisman, Chua and Sharma, 2005). Given the context of this study, our review focuses on agency theory effects on board composition and resource effects of CEOs on family firm resources and their management and deployment. We draw on the considerable literature on corporate governance and less work on family firms for this purpose.

**Professional CEO and Founder CEO**

Succession literature has examined the efficacy of an outsider CEO vs. an insider CEO although with conflicting results (Kesner and Sebora, 1994). Outsider CEOs can contribute to positive firm performance since they bring in fresh perspectives and have an ability to initiate strategic change (Shen and Cannella, 2002; Kesner and Dalton, 1994). Further, professional outsider CEOs have been considered to be more
objective in decision making than founder (in our case family) owners since their personal stakes in the business are not that strong (Schein, 1986).

However, outsider CEOs were also found to have detrimental effects on firm performance. They lack firm specific knowledge, and this can impact their ability to make strategic decisions which require idiosyncratic firm knowledge. They may also find it difficult to find support from the top management team, since it is likely the TMT was appointed by the previous CEO, or in the case of a family firm by the founder CEO or family members (the insiders). This top management team has close connections with the family and may resent an outsider being appointed as the CEO, and may in fact even be hostile to the new CEO, and resist new changes while remaining committed to previous firm strategies (Shen and Cannella, 2002; Wiersema, 1995). Founder CEOs are more able to move swiftly and act quickly due to autonomous decision making (Dyer, 1986).

**Composition of the Board**

Board composition has mainly been studied as the choice between inside, outside, affiliated or independent/interdependent directors (Daily, Johnson and Dalton, 1997). Dalton, Daily, Ellstrand and Johnson (1998) identify three main yet distinctly different functions of the board. These are control, resource dependence and
counseling/expertise. The control function of the board stems from agency theories’ (Jensen and Meckling, 1976) view that separation of ownership and control in corporations leads to potentially self serving actions by managers. The board of directors is one mechanism that serves to monitor the actions of the managers to protect shareholders from their self serving behavior (Fama and Jensen, 1983). Thus based on this view, outside directors are preferred to inside directors as they are independent of the firm. However an alternative view is suggested by stewardship theory which maintains that managers are trustworthy and good stewards of the corporation. ‘They diligently work to attain high levels of corporate profit and shareholder wealth’ (Dalton et al., 1998: 271).

In terms of resource dependence, there is general consensus regarding the superiority of outside/ independent directors versus inside/affiliated directors. Pfeffer and Salancik (1978) used resource dependence theory to argue that external board members provide access to valuable resources, information and networks that can protect the firm from adversity. Similarly, Wagner et al (1998) suggested that outside directors have greater breadth of knowledge and experience from external sources than insiders.
The advice and counseling function of boards however has mixed views. Some researchers have argued that outside directors are beneficial since they can bring in experience and knowledge not possessed by others (e.g. insiders) in the firm, and thus provide quality of advice to the CEO distinct from other others (Zahra and Pearce, 1989). However others have argued that insiders can provide superior advice on strategic issues since they have specialized knowledge and expertise about their organizations which only comes from personal experiences. Thus they can provide boards with higher quality and richer information than outsiders (Baysinger and Hoskisson, 1990). This may also help them to be better at monitoring top managers due to familiarity with and understanding of the organization (Esienhardt, 1989). Not surprisingly, empirical work on insiders vs. outsiders’ effects on firm performance also has equivocal results with positive negative and non-significant findings (Daly, Dalton and Cannella, 2003; Wagner et al 1998).

Family Firms’ Corporate Governance

We found less work on boards and family firms, in particular on the performance impact of board composition and outside CEOs in family firms-the focus of this study. One study by Voordekkers, Gils and Van den Heuvel (2007) however examined the determinants of board composition in small and medium sized family
firms. According to Voordeckers et al (2007) board composition is even more important in smaller family firms than in large firms. This is due to several reasons. First, CEOs are more powerful in such firms than boards (Fiegener et al, 2000). Second, contrary to popular belief of agency problems being less important in family firms, these authors state that families face different kinds of agency problems. They face power struggles between family members, opposite opinions and differing objectives and sibling rivalry. Due to this unique family context, the roles of the board in these firms include control, advice and counsel and resource dependence roles (as in large firms) but also additional responsibilities such as ‘arbitration among family members, networking and disciplining of management’ (Voordeckers et al, 2007: 138).

**Overview of Arguments and Propositions**

Family controlled firms’ longevity is important for economic growth. Further, innovation is a key factor contributing to firm success (Tushman and O’ Reilly, 1996). Thus we seek to examine factors affecting innovation that leads to firm sustainability in family controlled firms. We draw from the resource based view and dynamic capability literature to propose that professional CEO as an outsider to the family controlled firm plays an important role in generating innovation in the family
controlled firm, thereby positively influencing firm performance, in this case continuity. We also propose a positive moderating effect of independent directors as board members on innovation and performance of family controlled firms.

Contextualization of Our Research

Our assumption and contextualization for our theoretical model rest on the following premises. Miller and Miller (2006) follow the definition of La Porta, Lopez-de-Silanes, and Shleifer (1999) and treat a family controlled firm as one that is partly owned by one or more family members and that family members’ total control as a minimum of twenty percent (20%) of the outstanding vote. However, since many family controlled firms possess family influence without substantial voting share, we follow Morck, Percy, Tian and Yeung (2005) and define family controlled firms as having at least ten percent (10%) voting shares. The family controlled firms of interest in our study are those in their second generation that are publicly traded. Even the firm is in its second generation but is still under the dominant influence of the founder CEO.
Many family controlled firms, like non-family firms, are very successful, and achieve success generation after generation. One of the reasons differentiating these firms and explaining their superior performance and continuity is innovation in the firm (Tushman and O’Reilly, 1996). As the main goal of family controlled firm is to achieve continuity through many successions of generations (Miller and Miller, 2006) it follows then that innovation in the family controlled firm becomes paramount, and may be the main objective of its performance. However, the innovative ideas and business processes that helped the firm at its early stage, maybe a hindrance for the next generation, especially if the founder prolongs his/her status as family CEO without continuous commitment to careful stewardship, long term investment in R&D, training, infrastructure and capability building (Miller and Miller, 2006, Han 2004, Birkinshaw, 1999). This may result in poor performance as inertia leads to lack of innovation (Gersick, 1991). Therefore, we focus our study on family controlled firms that enjoyed superior performance in their first generation; meaning the founder of the firm has achieved entrepreneurial success. We further focus our study on those firms that have family members or old time family friends on the management team and board of directors.
**Theory and Proposition Development**

The resource based view informs us that performance differences across firms are due to the diversity in each firms’ specific resources that are rare, valuable, costly to imitate, and non-substitutable (Barney, 1991). As these core resources become cornerstones of competitive advantage of the firm (Peteraf, 1993), it makes sense to further investigate how family controlled firms can develop competitive advantages that are lasting and specific, only to the family controlled firms. Tushman and O’Reilly (1997) suggest that innovation can be achieved by building a balanced portfolio of incremental and radical change for the firm. We extend this logic to suggest that family controlled firms may embrace the newness from a professional CEO joining the family entity (DeMott, 2008), and the professional CEO may adapt to the relevant practices in the family controlled firms and the two together form the specific family resource that is unique. When both the firm and the new professional CEO become harmonized, the union becomes a rare and valuable asset, thus a specific, rare, valuable, costly to imitate, and non-substitutable resource for the family controlled firm. This combination helps the family firm to not only take advantage of its unique resources (i.e. familiness) while effectively managing the disadvantages, but also helps the family controlled firm to integrate and deploy these resources to
attain sustainable competitive advantage (Sirmon and Hitt, 2003). Further, the positive effects of the professional CEO directly and indirectly generate innovation in the family controlled firms leading to superior performance and continuity.

Professional CEOs possess expertise, experience, knowledge and social capital (Adler and Kwon, 2002; Miller and Miller, 2006; Han, 2006; Han and McKelvey, 2008) that can serve as a valuable resource to the firm. Family controlled firms have unique market knowledge, business practices and social capital (Arregle, Hitt, Sirmon and Very, 2007) that contribute to the firm’s success. We argue that the combination of the professional CEO and the family’s knowledge, experience and social capital work together towards the goal of achieving longevity of the family controlled firm: this combination is the cornerstone of the family controlled firms’ dynamic capability and competitive advantage (Peteraf, 1993; Teece, Pisano and Shuen, 1997). It serves to integrate and deploy the unique resources (familiness) of the firm (Sirmon and Hitt, 2003) creating value, and thus can lead the firm to achieve superior performance. There are three reasons for this.
Internal and External Conflicts Remover

As an outsider of the family, the professional CEO serves as the harmonizer, enhancer and actor for many internal and external conflicts, making timely and strategic decisions without emotion. Professional CEOs can be particularly useful since their expertise provides the family controlled firms with access to external financing (Sirmon and Hitt, 2003), networking (Han, 2006), access to new information (Burt, 1992), strategy development (Miller and Miller, 2006), advice and counsel (Poza, 2007). In addition, as the professional CEO may have less investment compared to the family, he may act more as a diversified investor with less emotion (Voordeckers et al, 2007). Professional CEOs may also focus more on traditional business objectives such as profit maximization, growth (Han and Celly, 2008) and innovation (Sharma, Chrisman and Chua, 1997; Voordeckers et al, 2007). On the other hand, family CEOs may also have other family objectives such as maintaining family control, financial independence of the family, family harmony and family employment (Voordeckers et al, 2007, p 144) that may impede or conflict at times with the business of the firm (Poza, 2007). Finally, a professional CEO can provide family controlled firms with arbitration and conflict resolution (Voordeckers et al,
2007; Whisler, 1998) since they bring objective views free of family biases or long
term family rivalry.

**Shared Social Capital**

The logic of structural holes (Burt, 1992) and weak ties (Granovetter, 1987) views the professional CEO as the weak tie to the family controlled firm, who can bring in new knowledge and information. Moreover, the professional CEO may also bridge across boundaries of structural holes between the social network of the family, the firm, the investors’ and his own (Han, 2006). Effectively, the new social network formed may become a new dynamic capability and firm specific resource for the family controlled firm. This newly formed network led by the professional CEO allows the family controlled firm to attract and retain highly qualified talent, be included in elite networks, and receive access to critical, professional and timely information.

**Shedding Resources**

Although family controlled firms have unique resources (familiness), ironically these resources may become a source of competitive disadvantage. The opportunity costs of maintaining and leveraging inferior resources can reduce or even destroy
economic rent instead of creating it (Sirmon and Hitt, 2003). This is even more serious in family firms that are usually resource constrained. Removing excess or underutilized resources, in particular human capital, can allow the family controlled firm to be leaner by reducing excess costs, release financial capital, become more flexible and diligent. It can also lead to a break from path dependencies and break old routines and norms. By doing so, this may allow the firm to hire new human capital that can generate new ideas for innovation. In sum, all these actions can result in increased innovation for the firm by breaking inertia brought on by years of old timers and old routines and norms. Family controlled firms however find it difficult to shed resources, in particular human resources, since these comprise family members and family CEOs suffer from liability of emotional attachment. However, a professional CEO can execute shedding based on his or her executive and strategic decision that is objective and professional. Sirmon and Hitt (2003) similarly argue that removing family members who may be underperforming or simply less qualified is extremely difficult in family controlled firms due to generational outlooks, family ties and emotional links. Thus bringing in a professional CEO who does not have these attachments to the family can assist the firm to make such decisions, implement resource shedding, and focus on growing the firm efficiently and effectively.
managing all resources and capabilities possessed by the firm. When wasteful resources are shed by the professional CEO, the family controlled firm can allocate resources to build future growth via innovation. Based on this logic, we infer the following proposition.

**Proposition 1**: Professional CEOs are positively related to family controlled firms’ innovation and performance.

**Moderating Effect of Independent Directors**

Innovation is often delayed or prohibited in family controlled firms due to three reasons. First, the fabric of family controlled firms consists of management, ownership (investors and shareholders), and the family (Poza, 2007). The management executives in the family controlled firms may seek to build their empire (Morcel and Yeung, 2003; Miller, 2003) and focus on short term gain in order to take benefits when possible, if they feel that advancement in the firm are due to family desire rather than competence (Miller, Miller and Steier, 2004). Managerial distrust can drive family controlled firms into chaos, as the strategic choices of the family and the management are not aligned, and resources allocation becomes an issue and hotbed of conflict (Poza, 2007). Clearly, internal conflicts and chaos can directly and indirectly hinder possibility of innovation in the firm. Second, investors and
especially investors who have larger investment in the family controlled firms may have a very short term horizon for their investment. Innovation often requires long term commitment in time and cost. But investors may perceive innovation as too costly and risky, therefore, may not be directly benefiting to their investment portfolio and objective (Sirmon and Hitt, 2003). As a result, these investors may block innovation and vote for safe bets in the interest of their ownership. Finally, family’s internal conflicts may emerge as the family firm grows, siblings rivalry increases as succession decision approaches, monarch style exit of the founder where the founder may become a shadow controlling the decision making process, exploitation of minority shareholders and spouse shareholders who may not have the same interest and passion in the family controlled firms. All these factors may contribute to the family controlled firms’ lack of time and interest to focus on innovation efforts (Miller, 2003; Poza, 2007; Han, 2004).

Independent directors are supposed to bring ‘arbitration among family members, networking and disciplining of management’ (Voordeckers et al, 2007, p 144). Thus, we propose, that independent directors of the board may serve as a force to align the family, management and investors, ease conflicts, resolve differences and
more importantly, help the firm to focus, develop and build consensus of morale to sustain the family controlled firms with innovation and superior performance. Further, we argue that independent directors moderate the effect of the professional CEO on innovation and performance in several ways. First, we argue that independent directors may achieve the alignment of the three distinctive stakeholders in the family controlled firm and drive innovation to continuity of the firm by virtue of their title. The mere existence of independent directors bestows the family controlled firm with a sense of fairness, transparency in reward and promotion, and intention of longevity and competitiveness. The fact that the founder CEO and the board, often consist of family members, but are willing to invite independent directors, who are experienced, respected by the industry, and knowledgeable, signal to its management team, investors and all family constituents that the family controlled form is striving to achieve alignment and willing to resolve differences. Therefore, independent directors may conduct their duty to rid the firm of barriers and constraints to innovation buried in managerial and family conflicts in reward and promotion, family and investors’ conflicts investment timeframes, and family and management’s conflict in succession. Second, independent directors may act as a supporting voice when the professional CEO attempts radical innovation that may perceived as risky and
uncertain. Their industry knowledge and experience earn them respect on the board, and their voice on the board can help the professional CEO to strengthen the case for innovation, if such innovation is required and relevant to the firm’s continuity. Finally, family controlled firms may have old timers or family members on the board since the inception of the firm. Their traditional view coupled with group think from the family over the years, may lead the firm towards conservative strategic choices that trap the firm due to its past success (Tushman and O’Reilly, 1996). Therefore, we further argue that the number of independent directors must be larger than the old timers and family members to become effective members in family controlled firms. As independent directors serve as a critical member and positive moderators to the family controlled firms’ innovation and performance, we argue that they are the specific resources and dynamic capability to the family controlled firms and we propose the following:

**Proposition 2a**: Independent board members positively moderate the effect of professional CEO on innovation and performance in the family controlled firms.

**Proposition 2b**: Higher number of independent board members will have greater moderating effect on innovation and performance in the family controlled firms.
Discussion

Family firms are now recognized as being fairly distinct to non-family firms and have consequently attracted research attention from both entrepreneurship and strategy scholars. Most of the research has focused on what differentiates family from non-family firms, unique characteristics or familiness of family firms, founder effects and family firm performance. However, little attention has been paid to an equally important factor, innovation or the lack of it to family controlled firms’ survival. Furthermore even less attention has been paid to corporate governance in family firm and how outsider (non-family) executives such as professional CEO and independent board members can create innovation leading to improved performance and continuity of family controlled firms. In this paper, we drew on the resource based view and dynamic capability literature to demonstrate the positive effects of using non-family members as part of the corporate governance body in family controlled firms. Specifically, we developed a theoretical model and propositions to explain how a professional CEO combined with unique family resources can positively influence innovation and continuity in the family controlled firm. We also proposed a positive moderating effect of independent board members in the family controlled firms’ innovation and continuity.
Our propositions and model extend Sirmon and Hitt (2003) by demonstrating how family controlled firms can leverage their familiness (unique resources) by hiring professional CEOs and independent board members to achieve sustainable competitive advantage. Thus we contribute to resource based theory of the family firm by isolating how one specific resource—the professional CEO can bundle with other firm resources (in this case familiness) to produce a unique new bundle of resources that are a source of sustainable competitive advantage. Although a professional CEO by himself/herself may not be a source of sustainable competitive advantage for the family controlled firm and the unique family resources themselves may also not be sufficient to create value, the two combined can be.

Our model also advances current thinking on the uniqueness and basis for competitive advantage of family firms by illustrating how family firms can build on their advantages (vs. non-family firms) while managing their disadvantages (such as rivalry, disputes, non-business objectives). We also extend corporate governance research by focusing on an under-explored but extremely important organizational form—the family controlled firm. Our final contribution to family firm research is that our developed propositions form a baseline for future empirical studies in this important area of research.
This research also suggests important implications for managers and owners in family controlled firms. First, our study suggests that family members need to think carefully about hiring a professional CEO and independent directors as board members. While family controlled firms have traditionally been dominated (ie. controlled and managed) by family members it may be time for them to consider letting go and actively seeking to add outsiders as top management and board members. Doing so can facilitate rather than negate the unique advantages of family firms and even increase harmony and decrease conflict within the firm.

Secondly, professional CEOs and top managers should not shy away from joining family controlled firms and sitting on their boards, but instead should actively seek positions in family controlled firms. Their unique skills and experience can combine with the family characteristics to create a highly successful and innovative firm. Finally, policy makers and governments interested in growing their economy may consider advising family controlled firms – a large engine of their growth to seek professional CEOs and outsiders as board members instead of confining themselves only to family members. Doing so would enable them to not only achieve greater innovation and continuity but may also increase profitability and other business performance metrics such as growth and market share. This advice may be even more
salient for policy makers in emerging countries with much larger share of family
controlled and family owned firms.

Conclusion

In our research, we addressed the importance of innovation to family controlled
firms. More importantly, we drew upon the resource based view to articulate the
critical role of professional CEO, and the moderating effect of independent directors
to the family controlled firms’ innovation and performance. Extant literature in
corporate governance, resource based theory and entrepreneurship have well
documented the role of external CEO and independent directors to firm performance,
but our study is among the first attempt to link the resource based view and extend it
argue that the combination effect of family firm and outsiders can build specific
resources for the firm, and become a dynamical capability that leads the family
controlled firm towards innovation and continuity. Our testable propositions may
form the baseline for future research in this important subject area in family business,
corporate governance, strategy and entrepreneurship.
Selected References


**Figure 1: Resource Based Model of Professional CEO and Independent Directors on Innovation of Family Controlled Firms**
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The Role of Entrepreneurial Organizational Structure in Opportunity Identification and Exploitation: Resolving the Paradoxes of Uncertainty & Inertia

Krishna Poudel and Sherry Thatcher

Abstract

The void in theorizing at the interface of organizational structure (OS) and opportunity identification and opportunity exploitation motivated the present research. We contend the applicability of ‘organic vis-à-vis mechanistic’ organizational structure and ‘too-much-too-little’ organizational structure frameworks in the entrepreneurship context. Alternatively, we proposed a new framework of entrepreneurially-optimal organizational structure, defined as the differential development of various OS dimensions. To that end, we revealed and resolved two paradoxes, the paradox of uncertainty and the paradox of inertia, which are inevitably embedded in entrepreneurial processes.

Introduction

The debates of organic vis-à-vis mechanistic organizational structure (OS) and too-much vis-à-vis too-little organizational structure in the context of firm performance, environmental dynamism are perennial and polemic in organization literature (Burns & Stalker, 1961; Davis, Eisenhardt & Bingham, 2009; Mintzberg, 1979; Sine, Mitsuhashi & Kirsch, 2006; Weber, 1947). In these debates, the evidence is inconclusive as to which approaches are best (cf. Davies et al., 2009; Sine et al., 2006).

Some studies in the past (c.f. Covin & Slevin, 1989; Davis et al., 2009; Naman & Slevin, 1993; Sine et al., 2006) have discussed the relationship of structure and performance in the entrepreneurship context. Although these studies have immensely broadened our understanding of the relationship, a paucity of comprehensive theorizing in the intersection of organizational structure and entrepreneurship still exists. Many empirical studies merely took new venture performance simply as a new context of investigation (e.g., Sine et al., 2006) while others mentioned the relationship to the entrepreneurship context in passing (e.g., Alvarez & Barney, 2004; Covin & Slevin,
Even when organizational structure in an entrepreneurship context was part of theory building or testing, it was not the focus of these studies. For instance, Naman & Slevin’s (1993) focal argument was on the fit of entrepreneurship and the environment. And, Davis et al.’s (2009) investigation centered on the dynamism of environment and the too-much vis-à-vis too-little framework of optimality of organizational structure. To our knowledge, no study has theorized about organizational structure in the entrepreneurship context by incorporating two entrepreneurial processes, opportunity identification (recognition or creation or discovery) and opportunity exploitation (Shane & Venkataraman, 2000; Sarasvathy, 2001). This is the motivation behind the present research. A more comprehensive understanding of organizational structure in entrepreneurship contexts is necessary for the following reasons.

First, as we mentioned in the opening paragraph, given the inconclusive evidence and juxtaposed theoretical logic, the relationship between organizational structure and firm performance is intriguing and needs additional subtle, finely textured insights. Investigation of the impact of OS on entrepreneurial opportunity identification and exploitation has the possibility of generating new insights in both the entrepreneurship and organizational structure literatures.

Second, as scholars argue, the performance in entrepreneurial organizations, or entrepreneurial performance, is distinct from the usually connoted firm performance in strategy or organization literature (Shane & Venkataraman, 2000). Hence, the insights of OS developed in the context of firm performance might not be completely applicable in the entrepreneurship contexts of general entrepreneurship or corporate entrepreneurship.
Third, as Davidsson (2004) puts it: “The relationship between organizational characteristics and change on one hand, and discovery and exploitation of new venture ideas on the other, are important questions for entrepreneurship research”.

Finally, scholars deem two components of entrepreneurship process - opportunity identification (OI) and opportunity exploitation (OE) - as overlapping processes (e.g., Bhave, 1994; Davidsson, 2004; Sarasvathy, 2001). We argue that the two overlapping processes give rise to two paradoxes – the paradox of uncertainty and the paradox of inertia - and resolving these two paradoxes requires an entrepreneurially optimal organizational structure. Whereas reducing uncertainty is a desirable condition for opportunity exploitation, without the existence of uncertainty, opportunity identification would not be possible (Shane & Venkataraman, 2000; Williamson, 1981; Jensen & Meckling, 1976). Similarly, whereas structural inertia facilitates acquisition, efficacious recombination and marshaling of resources needed for opportunity exploitation (Shane, 2003), inertia obstructs and retards the adaptation or modifications needed in exploitation processes (Miller and Chen, 1994). Both of the paradoxes are explained extensively in the text of the paper.

In this paper, we build a new strand of organizational structure optimality, entrepreneurially-optimal organizational structure. In doing so, we borrow from both organic-mechanistic and too-much-too-little structural logic while simultaneously departing in major ways. For instance, while we build our theoretical framework on three widely accepted dimensions of organizational structure - complexity, formalization and centralization (Collins, Hage & Hull, 1988; Hage & Dewar, 1973) – we identify an additional dimension of organizational structure, richness of communication channels.
Deriving contingencies based on these dimensions of organizational structure, we develop and advocate an entrepreneurially-optimal organizational structure. The entrepreneurially-optimal structure we advocate resolves the two paradoxes mentioned above. In other words, it provides an optimality framework by identifying when inertia would be functional (or dysfunctional for that matter) and when uncertainty could be reduced (or can not be reduced for that matter) during OI and OE processes.

The rest of the paper proceeds as follows. In the next section, the definition and assumptions of entrepreneurship are stated. Then we review the debates and evidence surrounding organizational structure as they relate to firm performance. In the third section, we make the case that entrepreneurial performance is distinct from general firm performance, and as such, the conventional optimality arguments have limited applicability in the entrepreneurship context. Next, the criticality of OS in entrepreneurship context is explained. The following section covers entrepreneurially-optimal organizational structures. In this section, we explain the dimensions of organizational structure, including the new dimension we identify, as well as how entrepreneurial process gives rise to the two paradoxes. In section six, we extend our insights for resolving the paradoxes along with matrices derived from the dimensions of organizational structure. Finally, in the discussion section, we provide a summary conclusion, contributions of the paper, methodological implications, and potential limitations.

**Entrepreneurship: Definition & Assumptions**

There are many interpretations of entrepreneurship; self employment, small business, business ownership (mostly in economics, cf. Parker, 2009), creation of a new
organization (Katz & Gartner, 1988), competitive behaviors that drive market process (Davidsson, 2004; Kirzner, 1979) and the like. There is no convergence on what an entrepreneurship is (Parker, 2009). In this manuscript, in conformity with many authors (e.g., Sarasvathy, 2001; Shane & Venkataraman, 2000; Drucker, 2007), we follow a Schumpeterian conceptualization of entrepreneurship with a broad connotation. That is to say, we define entrepreneurship as the identification (recognition, or discovery, or creation) and exploitation of new opportunities. Entrepreneurial opportunity identification and exploitation is conceived here as one or more of the following: successful production of new goods, introduction of new methods of production, opening of new markets, finding new sources of supply, and industrial reorganization (Schumpeter, 1934). Note that we recognize the process of evaluation (Shane & Venkataraman, 2000), but consider it as subsumed within identification process for the same logic other entrepreneurship scholars have done so (e.g., Davidsson, 2004). We subscribe to the viewpoint that an entrepreneurial opportunity exists not only in product markets or service markets but also in factor markets (Shane & Venkataraman, 2000; Schumpeter, 1934).

There is a debate in the entrepreneurship literature about whether opportunities are recognized with higher cognitive ability (e.g., Kirzner, 1979, Gaglio & Katz, 2001), discovered capitalizing on asymmetric information about the objectively existing opportunity (Shane, 2003; Hayek, 1945, Fiet; 1996), created by the ones who have higher level of creativity, or created through abductive processes (Schumpeter, 1934; Sarasvathy, 2001). However, we regard recognition, discovery, and creation as simply
three methods of opportunity identification depending upon the nature of the opportunity concurring with Sarasvathy et al. (2003).

Although it can be assumed that majority of entrepreneurial opportunities will be exploited with the formation of new organizations, a \textit{de novo} organization is not a necessary condition for identification and exploitation of an entrepreneurial opportunity (Shane & Venkataraman, 2000). Identification and exploitation of entrepreneurial opportunities can be equally accomplished within an existing organization, which is often referred as corporate entrepreneurship (Barringer & Bluedorn, 1999; Stevenson & Jarillo, 1990) or intrapreneurship (Antoncic & Hisrich, 2001). We recognize that an entrepreneurial opportunity can be identified and exploited in the absence of a hierarchical organizing mechanism (an organization), in the market of opportunities (Shane & Venkataraman, 2000); however, these are rare events and do not fall within the boundary of entrepreneurship we defined here. Hence, the mode of exploitation, for the relationship we are theorizing, has to be within a hierarchical governance mechanism.

\textbf{Organizational Structure & Firm Performance: Debates & Evidence}

The influence of organizational structure (OS) on various aspects of an organization - such as on competitive interaction among firms (e.g., Vroom, 2006), strategic directions (Stieglitz & Heine, 2007), motivation (e.g., Sherman & Smith, 1984), political behavior of firms (e.g., Shaffer & Hillman, 2000), organizational learning (e.g., Lane & Lubatkin, 1998), and information systems (e.g., Kumar, Ow & Prietula, 1993) has been investigated. The relationship between organizational structure and firm performance, especially in the context of dynamic environments, has sustained a perennial and intriguing debate among organization scholars. From seminal works (e.g.,
Burns & Stalker, 1961; Mintzberg, 1979; Weber, 1947) to contemporary theorizing (e.g.,
Davis et al., 2009; Sine, Mitsuhashi & Kirsch, 2006), numerous insights and extensive
evidence have been offered that analyze various aspects of the relationship. More
specifically, two sets of related debates dominate the OS-performance relationship in the
literature – (1) organic structure vis-à-vis mechanistic structure and (2) too-much vis-à-
vis too-little organizational structure.

Usually, lateral coordination, networks of authority, and lack of task formalization
are referred to as the characteristics of an organic structure whereas vertical coordination,
hierarchy of authority, and formalization of documentation (rules, procedures and
instructions) are associated with a mechanistic structure (Collins, Hage & Hull, 1988;
Sine et al., 2006). The evidence of whether an organic or mechanistic organizational
structure is more conducive for the performance/survival in a dynamic environment is
inconclusive. Following the seminal evidence presented by Burns and Stalker (1961),
several other studies have replicated the finding that organic structure is better in
dynamic environments (cf. Collins et al., 1998). On the other hand, in line with the
classic Weberian argument, Sine et al. (2006) contend and provide evidence that a
mechanistic organizational structure is better for new ventures.

Organizational structure optimality, in other words, a balance between too-much
and too-little organizational structure for maximum performance, is equally preponderant
in the literature. This is based on efficiency-flexibility logic. Whereas organizations with
too much structure lack the flexibility needed for adaptation in a dynamic environment,
organizations with too little structure lack the efficiency (Martin & Eisenhardt, 2010;
Davis et al., 2009). In this framework, multiple literatures have suggested for an inverted
U-shaped relationship between organizational structure and performance (e.g., Hargadon and Sutton, 1997; Rothaermel, Hitt, and Jobe, 2006).

The argument linked to the too-much-too-little and to the mechanistic-organic structure debates is that of organizational change and organizational inertia\(^1\) (Hannan & Freeman, 1984). Organizational inertia is often referred to as a hyper-stability in structures and processes in an organization (Miller & Chen, 1994). In other words, inertia is regarded as a propensity to regularly repeat past actions and activity patterns (Jansen, 2004). Scholars in the evolutionary & population ecology tradition, especially in their early writings, strongly advocated that organizational inertia is advantageous for firm survival (cf. Hannan & Freeman, 1984; Nelson and Winter, 1982). Other theorists have considered organizational inertia deleterious for the adaptation and organizational changes necessary for surviving in a dynamic environment (cf. Hedberg 1981; Miller & Chen, 1994).

**Conventional Optimality Arguments: Constraints in the Entrepreneurship Context**

We set the stage for our narrative by succinctly reviewing the debates ongoing in organizational structure and organizational inertia and by clarifying the boundary conditions and assumptions of entrepreneurship for this manuscript. We contend that the conventional optimality of structures logic is constrained in the entrepreneurship context, and as such should be revisited.

The survival and growth of new ventures is fundamentally dependent on the successful identification and exploitation of entrepreneurial opportunities explained earlier (Sarasvathy et al., 2003; Bruderl, Preisendorfer, & Ziegler, 1992). With

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\(^1\) Organizational inertia and structural inertia are often used synonymously. But some studies (e.g., Miller & Friesen, 1980) refer structural inertia and process inertia as two forms of organizational inertia. In this manuscript we use organizational inertia and structural inertia interchangeably.
globalization and swiftly changing environments, the survival and growth of even established firms have increasingly been dependent on the degree to which they possess entrepreneurial characteristics (Covin & Slevin, 1991; Antoncic & Hisrich, 2001; Stevenson & Jarillo, 1990; Tetenbaum, 1998). To be more precise, changing competitive dynamics have forced even established companies to identify and exploit entrepreneurial opportunities. The conventional logic of organizational structures, even when applied in the context of entrepreneurship, does not distinguish between its impact on opportunity identification and exploitation (e.g., Davis et al., 2009). This omission has serious implications for the impact of organizational structure in the entrepreneurship context for the following two reasons.

First, the dimensions of organizational structure might have a differential impact on each of the processes. For instance, centralization of authority and decision making might hinder the opportunity identification process whereas a moderate standardization of procedures might facilitate OI. In a strictly centralized system, employees in the lower strata will have less likelihood of identifying an entrepreneurial opportunity, and sharing it with employees in the upper strata if they do identify an opportunity. *Ceteris paribus*, in such a system, those in the lower strata will have less motivation and incentive to begin with. When someone does not wield any decision making authority, she/he is less likely to proactively pursue or push any idea that requires such decision making.

The simplest type of opportunity identification method, opportunity recognition (Sarasvathy, 2003), requires that a person be consciously alert to the opportunities available in environment (Kirzner, 1979). In the absence of motivation or incentives, a lower level employee will be less likely to be alert to entrepreneurial opportunities, and
thereby, less likely to recognize such opportunities when they are present. If we consider identification as a process of connecting dots, it is not hard to see that the discovery and creation of ideas will require better skills than being alert to opportunities - as in the case of recognition. The point of this explanation is that the centralization of authority would hinder the OI process.

On the other hand, the impact of standardization of processes and procedures can be both positive and negative depending upon the magnitude, as far as OI process is concerned. For instance, when processes, procedures are standardized too much it might impede employees to be consciously alert to opportunities or to think creatively. On the other hand, moderate levels of standardized processes and procedures might actually help the recognition process. While moderately standardized processes and procedures will not create any disincentives for the alertness to entrepreneurial opportunity, it might help employees concentrate their attention on the right type of opportunities present in the environment. From attention-based theories of organizational action (e.g., Ocasio, 1997; Hoffman & Ocasio, 2001), we know that attention is crucial in identifying and processing relevant information from a wide range of environmental stimuli because of the constrained cognitive ability of the agents/individuals (March & Simon, 1958). Hence, from this discussion, it is plausible to assert that different dimensions of OS will have a differential impact on OI. A Similar case can be easily made for OE.

Second, the same dimension of OS might have differential impacts on OI and EO. The impact of centralization on OE, contrary to its impact on OI, is that increasing levels of centralization would likely facilitate the exploitation process. Since exploitation
requires efficiency on the part of rank and file employees and authority on the part of supervisors, a centralized system would be more conducive than a decentralized system.

Earlier we argued that entrepreneurial performance must be distinguished from the usual standards of company performance. Unfortunately, almost all of the studies which made arguments about the organizational structure-performance relationship in an entrepreneurial context conceptualized and measured performance exactly the way they would in a general performance context, that is in terms of revenue, profit, and other similar indicators (e.g., Sine et al., 2006).

Note that our contention is not about the use of these common proxies but in the fashion they are represented and operationalized. When operationalized in the same manner as usual performance measures, they constrain the content validity and construct validity of entrepreneurial performance. However, we can use the same proxies to measure entrepreneurial performance more appropriately. For instance, determining how much revenue growth in a company occurred as a result of a new product introduction, or a new production technology, would be a good measure of entrepreneurial performance. It would represent and measure the successful identification and exploitation of an entrepreneurial opportunity.

Simply analyzing some dimension of organizational structure using general company performance measures (e.g., revenue) does not capture the rich texture of the relationship between OS and entrepreneurial performance. We believe that this tendency is partially due to the absence of a theoretical framework to guide researchers interested in OS and entrepreneurial performance.

*The Significance of Organizational Structure in Entrepreneurial Process*
According to the estimates of Timmons (1994) over 20% of the businesses fail within one year of start up and more than 66% of them fail within six years. Literature suggests various theoretical explanations for this high level of failure of emerging organizations, such as liability of newness (Stinchcombe 1965), liability of smallness (Bruderl et al., 1992), prior founding and disbanding rates (Carroll & Hannan, 1989), and initial resource endowment (Cooper et al., 1994; Dahlqvist, Davidsson & Wiklund, 2001). Another major reason for failure is the inability of entrepreneurs to design an effective organizational structure (Aldrich, 1999; Shane, 2003). We explain this point further.

Research has suggested two broad categories of factors that influence the probability that certain people will identify particular opportunities: (1) the possession of prior information, and arguably asymmetric information, necessary to identify an opportunity (information corridors) and (2) the cognitive properties necessary to value it (cognitive processes and characteristics of recognizers)(Gaglio & Katz, 2001; Shane & Venkataraman, 2000; Shane, 2004). These two corridors (information and cognition) make an implicit but constraining assumption. That is, opportunity identification may occur in the absence of organizational structures. Note, however, that without a structural context, both of the corridors face an ontological vacuum. Without a structure neither the systematic pursuit of investment on information nor the facilitating cognitive processes can possibly be imagined.

The role of organizational structure discussed above is applicable in both new ventures and established organizations. In the case of a new venture, upon the transition from a nascent entrepreneur to a newly established firm (Reynolds, 1994), the
entrepreneurial process is more of an organizational phenomenon rather than an individual act. Founder-owner(s) might still be the most important decision makers but they will be constrained, or facilitated for that matter, by the routines, boundaries and activities that the organization requires during the entrepreneurial processes.

Organic-mechanistic and too-much-too-little frameworks of OS are not appropriate in studying the impact of various dimensions of OS on OI and OE. For instance, it would not be possible to have an organic structure in OI and a mechanistic structure in OE, as existence of the two structures simultaneously is not possible. We discussed earlier the implications of failing to investigate the impact of various dimensions of OS on OI and OE. For these reasons, we take a different approach in identifying optimal organizational structures in the entrepreneurship context. Our approach is to show the impact of various dimensions of OS on OI and OE individually, and then analyze them in concert. Doing so will allow us to see the minute details of the relationships as well as the gestalt of the relationships.

**Entrepreneurially-Optimal Organizational Structure**

Entrepreneurship scholars largely converge on the idea that the processes of identification and exploitation of opportunity go hand in hand, as overlapping processes (e.g., Davidsson, 2004; Bhave, 1994; Sarasvathy, 2001). These overlapping processes give rise to two paradoxes, the paradox of organizational inertia and the paradox of uncertainty – as we explain subsequently. The contingencies of relationship between various dimensions of OS and OI and OE that resolve the paradoxes would be an optimal organizational structure with respect to entrepreneurial performance. Because the
dimensions of organizational structure are crucial in our theory building and we introduce a new dimension of OS, we briefly review the literature in this area.

**Dimensions of Organizational Structure**

Earlier works considered either six dimensions (e.g., Kerlinger, 1964; Sherman & Smith, 1984) or five dimensions (e.g., Pugh, Hickson, Hinings, & Turner, 1968; Pugh, Hickson & Hinings, 1969) of organizational structure. The five dimensions Pugh et al. (1969) used and tested are: (1) specialization of functions, the division of labor in the organization; (2) standardization of procedures, the existence of rules purporting to cover all circumstances and applying invariably; (3) formalization of documentation, the extent to which rules, procedures, instructions, and communications are written; (4) centralization of authority, the locus of decision making; and (5) configuration of positions, the shape of the role structure. Later studies focused more on three dimensions of organizational structure - complexity, formalization and centralization (e.g., Hage & Dewar, 1973; Hage, 1980; Collins, Hage & Hull, 1988).²

Studies which used complexity (e.g., Hage & Dewar, 1973; Collins et al., 1988) as a structural dimension have mostly conceptualized complexity as the degree of functional specialization and professional activity/professionalization. For our purposes, we consider functional specialization, standardization of procedures, and configuration of the positions as three manifestations of complexity of processes an organization must develop in order to grow as a thriving organization. More specifically, we term this structural dimension as the complexity of processes and we consider this as the first dimension of organizational structure.

² Readers are also encouraged to review two classic studies, Pugh et al. (1968) and Grinyer & Yasai-Ardekani (1980), for an extensive discussion of the dimensions of organizational structure – from two different perspectives, macro and micro.
Almost all of the studies in organizational structure include formalization and centralization as two dimensions of organizational structure. Although conceptually distinct, collectively, the two dimensions can be thought of as instruments of control. Researchers have noted that formalization leads to both structural and communicational rigidities and serves as a control mechanism (cf. Collins et al., 1988). In previous studies, centralization has been conceptualized and operationalized in many ways – such as a locus of decision making authority, a degree of decision making autonomy of an organizational unit (Pugh et al., 1968), participation in decision making (Hage & Dewar, 1973), and compact or singular leadership structure as opposed to wider representative leadership structure (Sherman & Smith, 1984). All these various conceptualizations and operationalizations suggest a degree of control, or more precisely, the rigidity of control, in an organization. Hence, given this shared property of the two structural variables, we build our theory considering the rigidity of control as the second dimension of organizational structure.

We are not confounding or mixing the two variables here. We suggest that the rigidity of control is a second order construct, with formalization and centralization as first order latent factors. Similarly, the complexity dimension is viewed as a second order structural variable. Since the measurement of organizational structure would still be in terms of the five structure variables as the first order constructs, it would not create any dissonance within current literature - so far as empirical implications are concerned. On the other hand, by regarding complexity and control as second order factors of OS, we provide some conceptual clarity for the thesis we build.
Although formalization of documentation construct involves “communication” as one of the elements, we contend that this downplays the role of an extremely significant construct in organizational structure theorizing. A communication perspective of firms deems organizations as communication systems with various network nodes (individuals, teams, divisions etc.) connected internally and to external environment (cf. Zmud, Lind & Young, 1990). In addition, organizational communication takes center stage in another popular perspective of organizations, the knowledge based perspective of firms (cf. Grant, 1996; Nonaka 1994).

“Communication is at the center of everything” – T. Michael Glenn, president and CEO of FedEx.

“Communications are an essential part of what you have to offer to customers and shareholders. It has to be in the center to be optimally effective.” – Dell’s founder, Michael Dell.

(Quotes courtesy: Argenti et al. 2005)

The two quotes could not be more correct in reflecting a general perception among entrepreneurs and top managers regarding the role of organizational communication in today’s competitive environment. Communication with external constituents - like customers, government institutions - as well as internal constituents - like employees, investors – is significant for organizational performance (Argenti et al., 2005). Richness of communication in an organization manifests itself in two reflective dimensions - how systematically the communication channels are built and how many communication functions are included. From a strategic perspective, Argenti et al. (2005) mention six distinct communication functions – employee communication, marketing communication, financial communication, government relations, community relations,
and media relations. Haphazard and ad-hoc developed communication channels within an organization can be expected to be less effective compared to communication channels that are systematic and prescient. Organizational literature, more precisely beginning in the 1990s, has started to recognize and investigate the significance of organizational communication (e.g., Yates & Orlikowski, 1992; Jehiel, 1999; Dessein, 2002; Argenti, Howell & Beck, 2005). However, to our knowledge, organizational communication has not been conceptualized as a primary dimension of organizational structure. Note that formalization of documentation, although it involves communication, does not represent the full spectrum and richness of organizational communication.

We will discuss the significance of organizational communication as a third dimension of OS for entrepreneurship contexts later in this paper. Our argument here is to emphasize that the relative omission of organizational communication in organizational structure theory building is a shortcoming in OS theorizing. Hence, the third dimension of OS we conjecture about in this manuscript is the “richness of communication channels” – reflected in the quality of communication channels and the range of communication functions.

**Inertia Paradox**

As an organization emerges, the organizational structure will develop on the three dimensions mentioned above, more specifically, the complexity of process, rigidity of control, and richness of communication channels. When growing, an organization’s structure will develop some inertial forces endogenously. In addition, as the established literatures suggest, institutional forces and ecological forces, which can be collectively
termed as environmental forces, would cause the development of structural inertia exogenously (DiMaggio & Powell, 1983; Hannan & Freeman, 1984).

Successful exploitation of an entrepreneurial opportunity needs acquisition, efficacious recombination, and marshaling of resources (Shane, 2003). To acquire, recombine, and marshal necessary resources for opportunity exploitation, a firm will require a certain degree of complexity of the processes, some rigidity of control as well as adequately enriched communication channels. For instance, when acquiring a resource, a good communication channel with investors is necessary. Similarly, if procedures are not standardized (one factor of the complexity of the processes), there may be efficiency losses during resource recombination. For the successful exploitation of an opportunity, it is not only necessary for there to be OS development on the three dimensions of OS, but it is also necessary that a certain level of stability be required. For instance, liquidity constraints (capital constraints) are a well known phenomenon in entrepreneurship (cf. Parker, 2009). A new entrepreneurial firm would find it difficult to receive any outside funding unless it has formed a stable organizational structure. As such, structural inertia would be helpful for the exploitation of an identified opportunity.

Given that the processes of opportunity identification and exploitation are overlapping, opportunity identification might need re-identification or modification. If so, it would necessitate corresponding changes in the exploitation process - either adaptation in existing process or inception of an entirely new exploitation process. In that event, structural inertia would obstruct adaptation processes (Hackman, 1990), retard adaptation processes (Miller and Chen, 1994) and limit the organization’s ability to enter new markets or exploit new market opportunities (Nelson & Winter, 1982). Therefore, the
overlapping nature of the opportunity identification process and the exploitation process gives rise to an inertia paradox (see figure 1). In fact, firms are unlikely to be successful without going through the cycle of identification – exploitation – re-identification - changed/new exploitation. Hence,

Conjecture 1: The overlapping nature of the entrepreneurial opportunity identification process and exploitation process gives rise to an inertia paradox, that is, a situation where a firm would require an inert organizational structure at the beginning of an entrepreneurial process but the inertia might potentially be deleterious for future entrepreneurial processes.

Our argument here is not about maximal organizational structure. Nor is it about the optimal OS as visualized in the too-much-too-little type of OS. Our thesis, instead, deals with the functionality of inertia. It is couched in the idea that organizational inertia can be functional (or advantageous) dysfunctional (or disadvantageous) depending upon the differential degree of development on each of the three dimensions. The functionality of organizational inertia is a condition which facilitates both identification and exploitation processes. For parsimony and conceptual clarity, inertial functionality is grouped into three heuristic categories – functional, moderately functional and dysfunctional.
The rigidity of control (the centralization of decision making authority and the formalization of documentation) is the dimension which is simultaneously conducive and constraining to entrepreneurial process. On one hand, the rigidity of control is conducive for opportunity exploitation. Since exploitation would require resource marshalling and recombination (Shane & Venkataraman, 2000), it often needs a tighter command structure and the ability to take swift actions. In the absence of such a command structure and quick decision-making ability, exploitation may not occur even when an identified opportunity has great potential. On the other hand, a moderate or low rigidity of control will facilitate an opportunity identification process. Hence, since the rigidity of control cancels out its impact on overall entrepreneurial process because of the opposing impacts on OI and OE, it would not have any impact on determining the functionality of inertia.

We make the following conjecture:

**Conjecture 2**: Assuming that opportunity identification and exploitation are overlapping processes, there is no influence of the degree of rigidity of control on the functionality of inertia.

As an organization grows, the rigidity of control and the complexity of processes are likely to grow more systematically relative to the growth of communication channels. In fact, the experiences expressed by entrepreneurs corroborate this observation. For example, companies which now wield state-of-the-art communication channels, such as CEDANT and DELL, built their organizational communication system either out of crisis or necessity in difficult times (cf. Argenti et al., 2005). When organizational communication systems are developed in a haphazard or ad hoc way, they are likely to lack richness. Deliberate attempts, incurring substantial resources, are needed to alter a
defective communication system. Argenti et al. (2005) rightly observe that a tactical and short term approach to communication with its constituents puts a company in a competitively disadvantageous position. Since the richness of communication channels ensures a smooth flow of ideas from various constituents, it will facilitate the opportunity identification sourced in these constituents.

Take an illustrative example of a junior sales manager working in a hygiene product manufacturing company called A-1. It is possible that this employee, by the virtue of being in direct contact with the end users of the product, knows the limitations of the company’s products. In other words, the junior employee might identify a high potential entrepreneurial opportunity. When communication channels lack richness, it is less likely that the identified opportunity would ever reach the individuals in the top echelon who are responsible for evaluation and exploitation of the opportunity.

On the other hand, the richness of communication channels is equally crucial when evaluating and exploiting an identified entrepreneurial opportunity. Exploitation of opportunities requires learning, integration, transfer and creation of knowledge. The literature in organizational learning and knowledge has sufficiently established the role of communication (Rico, Sánchez-Manzanares, Gil, & Gibson, 2008). Hence, it can be safely asserted that the richness of communication channels is conducive for both OI and OE.

The complexity of processes – functional specialization, the standardization of procedures, and role configuration – will be negatively associated with both the OI and OE processes. We argue that only low or moderate levels of complexity of processes would be beneficial for both OI and OE.
Earlier we argued that a moderate standardization of procedure will facilitate the OI process. The same can be argued for a low standardization of procedure. Research has shown that successful entrepreneurs are often “jacks-of-all-trades” and “masters-of-none” (cf. Lazear, 2005). Too much specialization obstructs the ability to get out of one’s realm of expertise and connect dots. Since opportunity identification - no matter recognition, discovery or creation - is essentially connecting dots, high levels of functional specialization in an organization would mean a deficiency of generalists who can actually connect dots. Note that the same reasoning would apply to role configuration. Overall, low or moderate levels of the complexity of processes would be favorable for OI.

We now focus on the reason high complexity of processes is detrimental for the entrepreneurial process. Imagine two companies with the same richness in communication channels and the same rigidity of control but with different levels of complexity of processes. In this situation, the company with higher complexity of processes will be ill-equipped to respond to changing task demands and to demonstrate necessary coordination relative to the company with lower complexity of processes. To illuminate this point, we evoke the concept of shared mental models and teams (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). First, in both de novo and established organizations, marshalling and recombination of resources would inevitably involve team work within and across different levels of hierarchy. In addition, as suggested in entrepreneurship literature, the entrepreneurial activities are commonly carried out by founding teams or top management teams (Amason, Shrader & Tompson, 2006). Second, the overlapping of identification and exploitation processes necessitates recurring changes in task demands during the exploitation process. Thus, team work is an
indispensable, integral part of the entrepreneurial process. A shared mental model permits team members to draw on their own knowledge as a basis for the actions that need to be coordinated with that of others and allows for better handling of recurring changes in task demands (Mathieu et al., 2000; Cannon-Bowers et al., 1993). High complexity of the processes, that is, too much functional specialization, role configuration, and standardization, will impair the development and the use of shared mental models – so critical for team functioning.

On the basis of the discussion above, it can be asserted that low/moderate levels of the complexity of processes and rich communication channels will be highly desirable conditions for entrepreneurial performance. Therefore, if an organization demonstrates inertia with the above mentioned development pattern, in the dimensions of its OS, it can be considered as functional inertia. If one of the desirables is present, it can be considered as moderately functional inertia. And if none of the desirables is present, it can be considered as dysfunctional inertia.

Note that in table 1 we develop the contingency with all 8 possible combinations of high and low/moderate degree on the three dimensions of OS. The rigidity of control, in the first column is only for the purpose of demonstrating possible combinations. As derived in conjecture 1, since the net effect of the rigidity of control on entrepreneurship would be null and void, table 2 more succinctly exhibits the contingencies reflected in table 1.

Conjecture 3: Low/moderate levels of the complexity of processes and high levels of communication channels will give rise to functional inertia; high levels of the complexity of processes and low levels of communication channels will give rise to
dysfunctional inertia; and low/moderate levels of the complexity of processes and low levels of communication channels or high levels of the complexity of processes and high levels of communication channels will give rise to moderately functional inertia.

Uncertainty Paradox

Many existing theories across disciplines view establishing a new organization as a governance mechanism designed to handle uncertainty in the course of generating an entrepreneurial rent. Agency theory suggests that a new organization exists to minimize an agency risk (Jensen & Meckling, 1976). The view of transaction cost economics is that it would be improbable for a firm to emerge without the existence of uncertainty (Coase, 1937; Williamson, 1981). Entrepreneurial attempts are for designing the products and services of future (Sarasvathy, 2001; Sarasvathy et al., 2003; Schumpeter, 1934). Since no future is knowable and since entrepreneurial opportunity (as we defined earlier) inherently has the element of novelty, no matter the theoretical tradition (e.g., Knight, 1921; Schumpeter, 1934; Kirzner, 1979) we use, uncertainty is inherent in entrepreneurship (McMullen & Shepherd, 2006). That said, as we explain below, the overlapping of the opportunity identification process and the exploitation process means a paradoxical implication of uncertainty reduction.

On one hand, opportunity identification presupposes uncertainty. Entrepreneurial opportunity identification occurs when someone makes a conjecture that a set of resources is not put to its “best use” (Shane & Venkataraman, 2000). This condition would hold irrespective of the type of identification mode - recognition, discovery or creation. Sarasvathy et al. (2003) theorize that when both supply and demand are known, the identification mode is recognition (putting resources to good use to achieve a given
end); when either supply or demand is unknown the identification mode is discovery (discovery of a new means for a given end); and when both supply and demand are unknown, the mode of identification is creation. Logically and perceptively it can be seen that in the case of creation, the conjecture would highly differ across potential identifiers. But in the case of recognition, the conjecture differential among potential identifiers about how to put a set of resources to best use would be narrower/less – the differential conjecture in discovery falling in between the two. In all three modes, it is just the matter of degree of uncertainty, hence, it has to be present so that people make differential conjectures (Schumpeter, 1934). Also, note that no matter if it is an entrepreneur acting on behalf of his/her new firm or a top management team acting on behalf of a corporate organization, opportunity identification always involves making differential conjecture on how to put a set of resources to best use.

For illustration, consider that the top management team (TMT) at A-1 Hygiene Product Company learned that regular toothbrushes available in the market for children are not appropriate for children under the age of 7. As such, A-1 sees the potential for a specially designed toothbrush for this group of children. The TMT at A-1 has to make a conjecture that the firm resources available - the technology, capital, professionals, scientists and the like – will be put to better use in producing this new toothbrush than in manufacturing the original toothbrushes. This conjecture is made amidst a wide range of uncertainties – such as the comfort of the new toothbrush vis-à-vis the original toothbrush, the probability of consumers liking the product, the uncertainty associated with legal permission for selling such a product, and the possibility of someone making a more user-friendly substitute of the toothbrush. If these uncertainties did not exist, other
hygiene product companies would be equally likely to identify and exploit the opportunity.

On the other hand, when it comes to exploiting an opportunity by acquiring, combining, and marshalling resources, the very uncertainty which made a particular opportunity possible becomes an impediment. As mentioned earlier, exploitation of the opportunity, or successfully acting upon the identified opportunity, means reducing the uncertainty. There is a substantial and long-standing debate emanating from multiple traditions, like neoclassical economics (e.g., Knight, 1921), Austrian economics (e.g., Schumpeter, 1934), and psychology (e.g., Atkinson, 1957) in entrepreneurship about whether an entrepreneur (or a team of entrepreneurs for that matter) bears the uncertainty associated with entrepreneurship. However, these traditions converge to suggest that successful entrepreneurial performance entails reduction or management of uncertainty (Sarasvathy et al., 2003). Hence, the uncertainty paradox, an indispensable phenomenon of entrepreneurship, is that OI requires uncertainty and OE requires the reduction of uncertainty.

However, in this theorizing there is a valid counterargument. What if identification and exploitation are sequential or stand alone processes? If so, initially, the uncertainty benefits the identifier, and then she/he engages in organizing activity to reduce the uncertainty and to appropriate entrepreneurial rent. In this scenario, our thesis will be contestable. However, this is unlikely. First, as stated earlier, entrepreneurship literature considers OI and OE as overlapping processes (e.g., Bhave, 1994; Davidsson,
Second, we argue that the notion of sequential process would need to make two assumptions: (1) once an opportunity is identified, there would be no more conjectures regarding that opportunity and (2) it would not need modification or re-identification. These assumptions are rather distant from reality. In reality, there would be conjectures on the part of different actors that come in contact with the focal conjecturer during the organizing process. At the very least, the competing conjectures of various potential identifiers would be valid unless the identified opportunity has been turned to ‘an exclusive right’ – for instance, a “patent” in the name of primary conjecturer. In our illustrative example, another hygiene product company, or the supplier of A-1, or any other related constituent is in a position to make that conjecture. Thus, the first assumption is easily challenged. In the case of the second assumption, hardly would there be any opportunity hundred percent identified \emph{ab initio}. Hence, the processes of identification and exploitation have to overlap, resulting in an uncertainty paradox, as explained above.

\textit{Conjecture 4: The overlapping of entrepreneurial opportunity identification and exploitation presupposes an uncertainty paradox: that is, a situation where uncertainty is needed to have differential conjectures about the best uses of resources among potential opportunity identifiers, but the actions for the actualization of the conjecture need to reduce uncertainty.}

A further question revolves around how this paradox is related to organizational structure and how it can be resolved. As we explain below, the resolution requires identifying a contingency based on the dimensions of organizational structure and the sources of uncertainty. However, unlike in the solution of inertia paradox, because
uncertainty is a necessary condition in identification, solving the uncertainty paradox is possible only during opportunity exploitation phase.

For organizational performance in general, and for entrepreneurial performance in particular, sources of uncertainty can be broadly grouped as – the uncertainty inherent in environment (Milliken, 1987; Waldman, Ramirez, House, & Puranam, 2001) and the uncertainty inherent in the novelty of the opportunity (Schumpeter, 1934; McMullen & Shepherd, 2006).

If the uncertainty that yielded differential conjectures among potential identifiers originated from the new information hidden in the opportunity itself (for example say the technology required by the opportunity), it would need low rigidity of control, high complexity of processes and high communication channels to tackle uncertainty in the exploitation phase. The low rigidity of control would mean less hierarchy in decision making, and less formalized procedures, rules, and instructions which would ensure the richness of contribution from the employees in every level of hierarchy. Managing the uncertainty inherent in the new information of the opportunity would also require a high degree of functional differentiation and standardization of processes and procedures (higher level of complexity) for ensuring effectiveness of the actions directed to cope with multiple uncertainties. Similarly, high level of communication channels is likely to permit better coordination and development of shared mental models required to grapple multiple uncertainties as explained earlier.

Consider A-1 company and the new toothbrush again. If uncertainty is inherent in the shape, chemicals, fabrics, and accessories, a junior sales manager would probably be in a good position to identify what should work and what should not work in the
toothbrush. His/her insights and expertise might be extremely valuable in reducing the uncertainties listed above. However, with a highly rigid control structure, she/he might not be able to and willing to contribute in the uncertainty reduction effort (we discussed the motivation and control relationship in earlier section therefore it would be redundant here). Plus, higher complexity of processes would be desirable as that would allow for handling a greater number of uncertainties. For instance, a sales manager might help in designing accessories, an engineer can contribute to the fabric and chemical concerns, and a graphic designer can help in creating the shape of the toothbrush. Obviously, for all these experts to contribute in uncertainty reduction multiple communication functions (mentioned earlier) and their systematic development would be needed.

On the other hand, if uncertainty lies in the environment, for example say a policy change that impacts the identified opportunity, then it would require high rigidity of control, low complexity of processes, and high communication channels. Say the toothbrush needs a specific kind of fiber that has not been used in such products before. Whether the government will approve this particular type of fiber in child-related products can be considered as a source of environmental uncertainty. If the communication channels of A-1 company include a well-developed government relations function, it can to some extent reduce that uncertainty. The point here is the necessity of richer communication channels. Since uncertainty does not reside in the novelty of the product, the higher rigidity of control is more important as it would ensure effective, swift action on the part of employees. Say, after incurring good amount of sunk costs in marketing and product development, A-1 finds that the government has passed a ban on some material used in the toothbrush. To cope with this environmental uncertainty, A-1
would need to make swift adaptations. High complexity of processes in this situation would prove counterproductive because the employees would have difficulty breaking away from their standardized procedures, to make quick adaptive actions.

In nutshell, the richness of communication channels is always desirable regardless of whether the source of uncertainty resides in the environment or in the novelty of the opportunity. When uncertainty stems from the environment, low rigidity of control and high complexity of processes are needed. When uncertainty results from the novelty of the opportunity, low complexity of processes and high rigidity of control are desirable. (See table 3)

Conjecture 5: Resolving the uncertainty paradox is only relevant for opportunity exploitation. The contingency based on two sources of uncertainty, the environment and novelty in the opportunity, and two organizational dimensions, the rigidity of control and the complexity of processes, would resolve the paradox. The richness of communication channels is an obligatory condition.

Conjecture 6: If uncertainty stems from the novelty of the opportunity itself, a high level of complexity of processes and low level of rigidity of control would reduce uncertainty. On the other hand, if uncertainty results from the environment, a low level of complexity of processes and high level of rigidity of control would reduce uncertainty.

Discussion

Motivated by the void in theorizing at the interface of organizational structure and opportunity identification and opportunity exploitation, we began our inquiry by
reviewing the debates and evidence in organizational structure and performance relationship. Juxtaposed logic and contradicting evidence in three major conversations in organizational structure – performance relationship (organic vis-à-vis mechanistic organizational structure, too-much-too-little organizational structure, and organizational inertia) provided the foundation necessary for our thesis in this paper. We extensively argued that entrepreneurial performance is different from usually connoted organizational performance and showed that existing frameworks of OS-performance would not be appropriate in the entrepreneurship context. Alternatively, we proposed a new framework of entrepreneurially-optimal organizational structure, defined as the differential development of various OS dimensions. We provided a coherent, finely textured relationship between OS and entrepreneurial performance. To that end, we revealed two paradoxes, the paradox of uncertainty and the paradox of inertia, which are inevitably embedded in entrepreneurial processes. Our major thesis stated that an entrepreneurially-optimal organizational structure would resolve these two paradoxes, and as such, facilitate entrepreneurial opportunity identification and exploitation. While we built our entrepreneurially-optimal structure off the widely used and tested structural variables, we made a serious endeavor to justify the addition of organizational communication as a major dimension of organizational structure.

Were the paradoxes resolved? Yes, but in a tricky way. We found some common roots of both of the paradoxes. Standing alone, we resolved both of the paradoxes effectively. Interestingly, some solutions of the two paradoxes converged. Readers might note that resolving the inertia paradox needed low complexity of processes and high communication channels which were also true to resolve the uncertainty paradox when
uncertainty stemmed from the environment. It would suggest that an entrepreneurially-optimal organizational structure is possible. In other situations/contingencies, when uncertainty stemmed from the novelty of the opportunity, the solutions of the two paradoxes have considerable overlap but are different. That is, they need different combinations of three dimensions of OS. It would imply that, in this scenario, while deciding on the role of organizational structure in opportunity identification and exploitation, the agents of organizations (e.g., TMT, founding members) will have to consciously judge whether their organization is more vulnerable to the inertia paradox or to uncertainty paradox.

In summary, we made four distinct contributions. First, we initiated a conversation on the centrality of organizational structure in entrepreneurship theorizing and research. Second, we identified two obvious but not yet theorized paradoxes embedded in entrepreneurial processes. We connected various dots - uncertainty, inertia, organizational structure, opportunity identification and opportunity exploitation – to provide a coherent picture of entrepreneurial process solving the two paradoxes. Third, we introduced one of the most visible concepts in current organizational literature, organizational communication, as a dimension of organizational structure which is surprisingly downplayed in organizational structure literature. Finally, by exploring the conditions when structural inertia could be functional and when uncertainty could be reduced in the entrepreneurship context, we have extended the organizational theory literature.

Methodological Implications & Limitations
The focal level in the conceptual model we presented is organizational, as we are referring to opportunity identification and exploitation by an organization and the role of organization structure to that end. However, other variables discussed in the paper, either as the consequences, antecedents, or moderators of the relationship make the overall thesis a multi-level enterprise. For instance, the exogenous force that determines the level of organizational structure, the external environment, is certainly not an organizational level construct. On the other hand, the outcomes of a successful identification and exploitation of an entrepreneurial opportunity can be conceptualized at individual level (e.g., founder’s achievement need satisfaction), organizational level (organizational revenue growth), industry level (e.g., market creation), and even at societal level (creation of a social surplus).

The richness of communication channels identified in this paper, unlike the other two dimensions, would need operationalization. We made the concept clear with two reflective latent factors, the degree of systematic development of communication channels and the range of communication functions. However, because of the scope of the paper, we did not discuss its operationalization aspects comprehensively. Operationalizations of other constructs, like the rigidity of control and the complexity of processes, are straightforward as they can be derived from the existing, tested variables in the literature. Similarly, we have not discussed the operationalization aspects of constructs like opportunity identification and uncertainty as they could vary widely depending upon the context of empirical investigation.

Our study theorized the impact of inertia on opportunity identification and exploitation but not the other way round. The impact of performance on organizational
inertia of a firm has been also widely hypothesized (cf. Miller & Chen, 1994). Hence, it is possible that entrepreneurial performance also impacts organizational inertia.

Organizational inertia literature has listed many endogenous and exogenous factors - like sunk costs, dynamics of political coalitions, standardized activities, entry barriers, and past failure and success - as contributors in the generation of structural inertia (Rungtusnatham & Salvador, 2008; Hannan & Freeman, 1984). It is very possible that the functionality of inertia might also be dependent on the sources or determinants of inertia. Since our focus was elsewhere, on the relative development of various dimensions of OS, we did not touch upon that issue. A contingency of inertial functionality based on the sources of inertia would be another interesting study in this stream of literature.

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Sherry Thatcher, PhD, is an associate professor of Management & Entrepreneurship at the College of Business, University of Louisville.
References


### Appendix

**Table 1**

**Contingencies of Functionality of Inertia**

<table>
<thead>
<tr>
<th>Rigidity of Control</th>
<th>Complexity of Processes</th>
<th>Strength of communication channels</th>
<th>Inertia type</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>Low/moderate</td>
<td>high</td>
<td>Functional</td>
</tr>
<tr>
<td>high</td>
<td>high</td>
<td>high</td>
<td>Moderately Functional</td>
</tr>
<tr>
<td>high</td>
<td>high</td>
<td>low</td>
<td>Dysfunctional</td>
</tr>
<tr>
<td>high</td>
<td>Low/moderate</td>
<td>low</td>
<td>Moderately Functional</td>
</tr>
<tr>
<td>low</td>
<td>Low/moderate</td>
<td>high</td>
<td>Functional</td>
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<tr>
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<td>high</td>
<td>high</td>
<td>Moderately Functional</td>
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<tr>
<td>low</td>
<td>high</td>
<td>low</td>
<td>Dysfunctional</td>
</tr>
<tr>
<td>low</td>
<td>Low/moderate</td>
<td>low</td>
<td>Moderately Functional</td>
</tr>
</tbody>
</table>

**Table 2**

**Contingencies of Functionality of Inertia**

```
+-----------------+-----------------+-----------------+--------------------------+
| Complexity       | Region of       | Region of       |                          |
| of processes     | Dysfunctional   | Moderately      |                          |
|                  | Inertia         | Functional       |                          |
| High             |                 |                 |                          |
| Low              |                 |                 |                          |
+-----------------+-----------------+-----------------+--------------------------+
| Low             | Region of       | Region of       |                          |
|                 | Moderately      | Functional       |                          |
|                 | Functional       | Inertia         |                          |
| High             |                 |                 |                          |
| Low              |                 |                 |                          |
```
### Table 3
**Contingencies of Uncertainty Reduction**

<table>
<thead>
<tr>
<th></th>
<th>Complexity of Processes</th>
<th>Rigidity of Control</th>
<th>Prospects for Uncertainty Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uncertainty inherent in the novelty of opportunity</strong></td>
<td>High</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Low</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td><strong>Uncertainty inherent in Environment</strong></td>
<td>High</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Low</td>
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</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Figure 1
**Inertia Paradox**

Entrepreneurial Process

- Opportunity Exploitation
- Opportunity Identification

Organizational Inertia

- Facilitates
- Obstructs

### Figure 2
**Uncertainty Paradox**

Entrepreneurial Process

- Opportunity Exploitation
- Opportunity Identification

Uncertainty

- An Obstructing Condition
- A Necessary Condition
Youth Entrepreneurship and Workforce Development:  
The Crossroads of Ideation and Job Creation

ABSTRACT

A number of empirical and theoretical research studies have demonstrated links between entrepreneurship and unemployment (e.g. Audretsch, Carree, & Thurik, 2001) suggesting that higher levels of unemployment will lead to an increase in start-up activity based on decreased opportunity costs in launching a business enterprise. The authors of this paper present a unique partnership initiative designed to link entrepreneurship education with socio-economic distressed youth experiencing chronic unemployment. Through the U.S. American Recovery and Reinvestment Act (ARRA) and the Workforce Investment Act, a new “E3” (Employ, Enrich, Engage) Youth Employment and Training Program provided summer employment opportunities for economically and academically “at-risk” youth in Racine County, Wisconsin during the summer of 2009. There were a total of 240 youth that participated in this Racine County Workforce Development Center led program with a “commencement celebration” at the end of summer. The program received local, regional and national acclaim as a result of the unique private/nonprofit/public partnerships arranged, and because of the significant leveraging of federal funds to stimulate local social and economic capital.

A primary “E3” objective was to develop a cohort group to receive entrepreneurial training in fall 2009 as both an exercise to launch two new “green” businesses, as well as to create an entrepreneurial mindset as an enhancement to future employability. In partnership with the University of Wisconsin-Parkside Small Business Development Center and members of the entrepreneurship faculty, the youth participant group, comprised of 20 students ranging in ages 18-24 and varying levels of educational attainment, was provided assistance in developing and
launching a Green Car Care business along with a new venture for Green Lawn Care. In addition, the E3 entrepreneurship cohort was provided with a 13 week course, specifically geared towards youth entrepreneurship. The course, designed by NxLevel, allowed for students to explore their own entrepreneurial ideas, learning key components such as finance, marketing, ideation, opportunity analysis, legal structures, and management team formation. Concurrently students were being challenged to think creatively and examine ways to add value to current constructs. This further enhanced their entrepreneurship education experience as a mindset for approaching employment and future careers.

This paper will address the following three primary questions: First, how do entrepreneurial educational attainment and achievement outcomes for students contribute to workforce development goals regarding unemployment? Second, what correlations can be made between developing an entrepreneurial mindset and stimulating further educational attainment goals for economically and/or behaviorally “at-risk” students? Third, how can entrepreneurial teaching efforts contribute to the growing community development focus regarding transforming social capital into economic capital?

Data for this project is derived in part from a Web-based peer created survey of the youth participating in the “E3” Program. The survey was created by students enrolled in a university continuing education course focused on the impacts of the ARRA. Data is also utilized from an instructor administered post-assessment survey, valid nationally norm based work skills assessments (e.g. Work Keys and Learning Resources), and qualitative data from program delivery partners. Additional contextual information is derived from media stories generated by the students’ entrepreneurial activities. This paper will also present qualitative findings from the
entrepreneurship training and education program to examine student impacts, and to offer insight into future research and education enhancements within this area.

In an effort to have useful applications to U.S. lawmakers and the ARRA, as well as to university and workforce development professionals’ policy and programmatic decision making, this research also reviews and evaluates documented course and entrepreneurial work product outcomes and impacts. Students, educators and staff explored principles regarding sustainable management and “triple bottom line” principles, and their conclusions are addressed through the lens of the researchers and existing literature (e.g. Bansal & Roth, 2000; Bilgin; 2009; Bridges & Wilhelm, 2009; Burger, Daub, & Scherrer, 2009; Dixon & Clifford, 2007; Stark & Marcus, 2000). In order to have further practical utility, research regarding the links between social and economic capital (e.g. Hutcheson and Morrison, 200x) are examined through entrepreneurial scholarship theory and practice.

As the United States wrestles with developing meaningful strategies to stimulate workforce and economic development, this research informs scholars and policy makers about how entrepreneurial scholarship can enhance and/or detract from broader community development goals.

References


Exploring gender differences in the innovation activity of entrepreneurs: A multi-dimensional analysis

Principal Topic & Research Questions

Creating innovation is of immense interest (Baumol, 2002) as it is the primary instrument of competition for many firms. A number of research studies examining academic and industrial scientists have shown that gender plays an important role in innovation activity, with men producing a higher degree of patents compared to women (Whittington & Smith-Doerr, 2005). Considering the bulk of innovations are created by new firms it is surprising that little research has examined gender differences in the innovation activity of entrepreneurs. Although most scholars agree that entrepreneurship is a gender-based process, little research has explored the gender—innovation relationship in new firms, representing a gap in the literature. We address this gap, and explore three potential mediating factors between entrepreneur gender and innovation activity.

To increase our understanding of gender and innovation activity, we draw from recent research that suggests a number of multi-level factors (i.e., individual, inter-firm, and spatial location) facilitate innovation. First, formal education has been shown to bear on entrepreneurial outcomes with more advanced degrees being associated with higher degrees of innovation (Marvel & Lumpkin, 2007). In addition, Hagedoorn (2002) demonstrated that network collaboration expose individuals to a broader range of R&D partnership opportunities. These inter-firm partnerships allow for the ability to acquire and apply knowledge in useful ways as well as the acquisition of resources (Tsai and Ghoshal, 1998). In addition to individual educational background, and inter-firm partnerships, there has been increasing interest in the notion that geographic location impacts the competitive position of firms (Porter, 1998). One view is that firms are motivated to locate next to one another because of economies of agglomeration. That is, the net benefit to being in
more clustered geographic areas increases with the concentration in that particular location (Arthur, 1990). This rationale suggests the innovation activity of geographically clustered firms improves as cluster size increases.

Deepening our understanding of the relationship among entrepreneur gender and innovation activity has rich theoretical and practical implication for entrepreneurship. We contribute to the literature by developing and testing a model using educational background, inter-firm partnerships, and the regional location of the new firm as mediators between the gender and innovation activity relationship.

**Methodology/Key Proposition**

To test our model, we draw on data recently collected by the Korean Small and Medium Business Administration (KSMBA). The KSMBA is a branch institution of the Korean government with a mission of formulating and implementing public policy to promote the development of new firms. The sample includes 4,538 founders of new firms that are no more than six years old (Brush, 1995; Shrader, 1996). The sample includes a number of industry sectors including low-tech manufacturing, high-tech manufacturing, general service, and information technology.

To measure gender, we created a dummy variable that indicates whether the founder is male or female. To assess founder education background we used the academic major of their highest degree. Engineering and natural sciences was coded as a 1 and all other responses as 0. To measure inter-firm partnerships we used the level of technology cooperation that new firms maintain with universities, public R&D institutes, and other private companies. To assess regional location, we used the total number of employees in the county in which the firm is located (Carlton, 1983; Holmes, 1998). This includes all 234 counties of Korea. We categorized all 234
counties of Korea into five groups (i.e., 1-5) based on the number of employees clustering in the representative county. Consequently, the 20% of counties with the least employees were coded as a 1, and the 20% of counties with the most employees were coded as a 5. To assess innovation activity we use two measures: patent activity and R&D intensity.

**Contributions**

This research makes a number of contributions to emerging research on gender and entrepreneurship. First, it develops and tests a more comprehensive, multi-level model of gender and innovation activity than previously available. Little research has examined differences in innovation activity among male and female entrepreneurs. We advance the body of knowledge by demonstrating how combinations of individual background, inter-firm partnerships, and venture location affect the relationship among gender and innovation activity. Our preliminary results suggest that men and women founders have systematic differences in education, inter-firm relations, as well as location strategies. In turn, these bear on the innovation activity in terms of patents applied for as well as R&D intensity. Despite the increasing attention on gender and female entrepreneurship in particular, the notion of how these entrepreneurs can improve the rate of innovation creation has not been adequately explored. Traditionally, gender differences in entrepreneurial outcomes have been attributed to human or social capital (Greene, 2000), risk tolerance (Cliff, 1998), and that women tend to be more sensitive than men to a variety of non-monetary factors (Burke, 2002). Our study offers a potential new direction in deepening our understanding of how male and female entrepreneurs can increase the capacity to innovate.
Entrepreneurship: A Term of Art

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Abstract

This conceptual paper introduces a three-dimensional perspective to explain the entrepreneurship phenomenon. The three-dimensional perspective is named the “Definitional Sphere of Entrepreneurship” and is intended to shift the discussion of entrepreneurship away from the battle-of-the-definition or the definition-of-convenience approaches to a more reflective and inclusive approach that searches for the underlying dimensions to explain the phenomenon of entrepreneurship. This approach will facilitate more explanations of the phenomenon rather than fewer and competing explanations of entrepreneurship.

Introduction

Entrepreneurship is a term of art, and as a term of art, entrepreneurship represents a phenomenon of importance for those who practice it, study it, as well as for the communities that support and depend upon it. Yet, entrepreneurship is in danger of losing its meaning and usefulness in the grammar of business, economics, and public policy, because entrepreneurship is being used to simplify the explanation of nearly everything that is good about business. Matlay notes that “In practice, . . . , entrepreneurship has entered everyday parlance and, as a generic term, is used in a variety of contexts and it encompasses a broad range of interchangeable meanings and situations” (Matlay, 2005, p666). If an activity involves risk and uncertainty along with some kind of reward, entrepreneurship is the term
used to name that activity. In fact, the word entrepreneurship is being used to name a strategy that firms can use to succeed. Several scholars have developed a model to explain how a firm can use entrepreneurship as a strategy (Meyer and Heppard, 2000) while others clearly state that “Entrepreneurship does not exclusively focus on the isolated individual creating a company” (Rispal, Boucler, and Verstaraete, ___, p2), even though we all recognize that “entrepreneurship is fundamentally personal” (Baum, et al, 2007, p1). In addition entrepreneurship is seen from different perspectives: The general public views entrepreneurship as the path to independence, ownership, and great wealth; academics view entrepreneurship in terms of behavior, process, attributes, cognition, innovation, and from micro- and macro-economics perspectives; while policymakers focus on the outcomes of entrepreneurship such as job and wealth creation, community development, and quality of life created by the social entrepreneur. Each perspective offers a different definition of entrepreneurship; a different outcome. Are these perspectives opposing or complementary? Are we seeing different faces of the same phenomenon or does each perspective represent a distinctly different phenomenon that we happen to name entrepreneurship for convenience? Is there commonality among the perspectives?

Approximately 25 years ago, the word entrepreneurship was used by scholars and professionals who believed in the uniqueness and value of entrepreneurship when the field had little respect in academia. This belief in entrepreneurship reversed the opposing beliefs commonly held approximately fifty years ago. The interest in entrepreneurship has come a long way from the days of the Organization Man in 1956 during which time Whyte “… challenged and refuted claims of entrepreneurial vigor and daring in business by describing an ongoing bureaucratization of white-collar environments -- board rooms, offices, laboratories. . . that the entrepreneurial scramble to success has been largely replaced by the organizational crawl" (Kaufman, 1999). However, Whyte (1957) did not end his derogatory
comments about entrepreneurship with the above quote, but continued to drive home his point with the following statements:

“They (college seniors) want to work for someone else. Paradoxically, the old dream of independence though a business of one’s own is held almost exclusively by factory workers – the one group, as a number of sociologists have reported – least able to fulfill it.” (Whyte, 1957, p75)

“. . . less than 5 percent (of college seniors) express any desire to be an entrepreneur. . . . Of the rest, most have one simple goal: the big corporation.” (Whyte, 1957, p75)

“The entrepreneur, as many see him, is a selfish type motivated by greed, and he is, furthermore, unhappy. The big-time operator as sketched in fiction eventually so loses stomach for enterprise that he finds happiness only when he stops being an entrepreneur.” (Whyte, 1957, p76)

“Small business is small because of nepotism and the roll-top desk outlook, . . . “ (Whyte, 1957, p76)

Today being called an entrepreneur is considered good in today’s business, and entrepreneurship awards are given to a wide array of individuals. Is every business person an entrepreneur? If so, this paper posits that entrepreneurship will become a meaningless word, because it fails to identify or stand for a unique phenomenon. Similarly, an underlying premise of this paper is that entrepreneurship is not ubiquitous. Instead, entrepreneurship is a “minority phenomenon” (Baum, et al, 2007, p300) and practiced by only a small percent of the population at any moment in time.

“What is entrepreneurship?” has been asked and answered by scholars since Cantillon first used the word in 1755. Definitions vary greatly and serve different purposes. Many definitions compete and conflict with each other while other definitions are ignored. Little effort is exerted to reconcile that variance. “Indeed, even the OECD\(^1\) itself contributed to the confusion since virtually every study that has focused on entrepreneurship has presented a different definition of the term” (Ahmad and Seymour, 2008, p5). How can so

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\(^1\) Organisation for Economic Co-operation and Development (“OECD”), 2, rue André Pascal F-75775 Paris Cedex 16 France. Website: http://www.oecd.org
many well-intended definitions of entrepreneurship exist if we are all observing the same phenomenon?

What is the phenomenon represented by the word entrepreneurship? The challenges of finding the best definition of entrepreneurship are daunting. A common approach to seeking the best definition is to engage in lengthy and reflective discussions in order to identify a set of attributes that best fit the scholar’s observations of entrepreneurship. This approach can be called the “battle of the definitions,” i.e., whoever presents the most compelling definition “wins” the battle. Or, many scholars create a “definition of convenience” by stating the definition of entrepreneurship used for their particular study and leave it to the reader to determine the appropriateness of the definition, or simply “bypass the discussion of entrepreneurship definitions altogether, and simply equate entrepreneurship to a specific empirical measure . . .” (Ahmad and Seymour, 2008, p5). This paper documents thirty-seven distinctly different definitions of entrepreneurship spanning nearly 250 years of scholarship. A key question at this point is to ask ourselves whether we are seeking the best definition of the word entrepreneurship or searching for the best explanation of the phenomenon.

This paper forsakes the search for a single, best fit, definition of entrepreneurship. Instead, this paper posits that the multiple perspectives will provide a more in-depth understanding of entrepreneurship by making the presumption that many present definitions represent valid perspectives of the entrepreneurship phenomenon. An in-depth explanation of the multiple perspectives is presented in a book written by Daniel F. Jennings, Multiple Perspectives of Entrepreneurship published in 1994 and a recent publication in 2007 that emphasizes the need for an “inclusive framework” (Baum, et al, 2007, p36). This paper will identify several dimensions or components, within a common framework in order to explain entrepreneurship. Instead of rejecting some concepts in order to craft the most cogent
definition, this paper will attempt to include divergent and apparently different perspectives into a common framework to help explain entrepreneurship. The underlying rationale for seeking a three-dimensional explanation of entrepreneurship is based on the belief that entrepreneurship is a multi-faceted phenomenon resulting from the interplay among person, task, and environment (Shane 2003, p4) (Baum, et al, 2007, p315). However, by focusing on the “narrow aspects of what the phenomenon of entrepreneurship is, . . . , seems to be driving out a more complicated and comprehensive understanding of (the) phenomenon of entrepreneurship” (Baum, et al, 2007, p326) at a time when complexity or “differentiated traditions” as Ahmad and Seymour stated in their 2008 article may partly explain the difficulty of crafting a single definition:


Definitions of Entrepreneurship

What does the array of entrepreneurship definitions look like? To answer this question a fundamental analysis of thirty-seven definitions of entrepreneurship was performed in order to identify the principal components attributed to entrepreneurship by each author. Definitions start with Cantillan’s definition in 1755 and include Schumpeter’s 1934 definition along with McClelland’s 1961 definition and end with Shane and Vankataraman’s 2000 definition and Ireland, Hitt and Sirmon’s 2003 definition. The list of definitions spanning nearly 250 years is certainly not exhaustive, but the list is representative of the array of different perspectives of entrepreneurship that have been entertained during that time period.
The results reported in Table 2 reveal that the thirty-seven definitions included some combination of twenty-six different principal components described in Table 2, but no author included more than four principal components in their definition. Are some of these definitions wrong? Should we engage in a long and arduous process to assess all definitions with the intention of reducing them to one compelling definition? Or, should we accept each definition as representing a valid but different perspective of entrepreneurship and search for a framework by which to give meaning to these definitions? The challenge of choosing the best definition is aptly stated by Baum who identifies six distinctly different types of definitions:

“. . . we explain the challenge caused by the unresolved definition of entrepreneur and entrepreneurship. [There are multiple definitions of “entrepreneur” in terms of (a) business stage (Shane, 2003), (b) types of businesses (Timmons, 2000), (c) business goals (Smith & Smith, 2000), (d) levels of innovation (Shane 2001), (e) degrees of independence (Bird, 1989), and (f) management (Bird, 1989)]” (Baum, et al, 2007, p4)

This paper has chosen an approach based on the perspective that any effort to reduce entrepreneurship to a single definition suitable for publication in Webster’s Dictionary does a disservice to the phenomenon the word represents. In order to capture the vibrant and dynamic nature of entrepreneurship, this paper develops a three-dimensional perspective of entrepreneurship, and the perspective is be named: “Definitional Sphere of Entrepreneurship.”

**Entrepreneurship as a Source of Change**

Where do we begin to explain the entrepreneurship phenomenon from a three-dimensional perspective? The answer is to begin from its most common element. What is

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entrepreneurship’s most common element? Change is the most common element. Change is an implicit or explicit aspect of our collective understanding of entrepreneurship. The notion of change is inseparable from the phenomenon of entrepreneurship, i.e., to have entrepreneurship without change is simply impossible. In fact, scholars discuss entrepreneurship within the context of the need for change. In fact, we seek an entrepreneur when a change is needed due to the failings of the status quo. The central role of change in entrepreneurship is succinctly stated by Baum: “The central theme of the process model (of entrepreneurship) presented . . . can be stated in a single word: change. The model assumes that entrepreneurship unfolds over time and that during different phases of the process, entrepreneurs are engaging in somewhat different activities” (Baum, et al, 2007, p27).

Scholars also agree that the entrepreneurs effect change in the world, because entrepreneurs perceive the world differently; believe in their ability to effect change; and have the skills to act on those two perceptions. Additionally scholars also agree that the notable achievements of these actions result from the inclination and ability to challenge conventional thinking, behave differently than those maintaining the status quo, and exhibit considerable confidence when effecting the change. Consequently, this paper places change at the epicenter of the “Definitional Sphere of Entrepreneurship” as an essential component for an understanding of the phenomenon, because entrepreneurship is viewed as a source of new ventures that create new methods of production or new markets. Following are eighteen words and concepts scholars have used to discuss and explain entrepreneurship and the entrepreneur’s capability to effect change.

**Outlier:** “In other words, Entrepreneurs seem to thrive as outliers, so it is true that the differences between a culture and its entrepreneurs matters more than the culture itself” (Baum, et al, 2007, p xxii).

**Disturb:** “A few entrepreneurs such as Bill Gates, Michael Dell, . . . have created companies that disturb, shape, and improve important business domains” (Baum, et al, 2007, p5).
Disruptive change: “As conceived by Schumpeter, entrepreneurs face extreme situations because their work involves disruptive change. They create new markets, disturb established markets, introduce new processes, and form new organizations (Schumpeter, 1911 and later editions) (Baum, et al, 2007, p8).

Markedly change: “Schumpeter, Taussig, and Knight proposed that entrepreneurs had the power to identify, operationalize, and market technological innovations that could markedly change the directions of societies” (Baum, et al, 2007, p10).

Marginalized: “... Hagen (1962) identified the more widely distributed potential for entrepreneurship in the population among people who see themselves as marginalized ... “ (Baum, et al, 2007, p11).

Driven outsider: “Works such as Zalenik and Kets deVries (1975) . . . considered the entrepreneur through a highly distinctive lens – that of the driven outsider, the individual who succeeded, despite strong psychological drives and conflicts” (Baum, et al, 2007, p13).

Rage hypothesis: “This approach (of driven outsider) paralleled the theme of marginality theorists in sociology, such as Bonjean (1966) and Hagen (1962), who even coined the term “rage hypothesis” to explain the motivation behind entrepreneurship” (Baum, et al, 2007, p13). ?Need source for Bonjean and Hagen?

Chance: “Chance events transform, in an unexpected way, either the context or some important dimension of the new venture itself, resulting in dramatic consequences: a casual meeting by the entrepreneur with an individual who then plays a decisive role in the fate of the venture; a natural catastrophe; a sudden war; a key individual’s premature death . . . Integrating chance into the entrepreneurial process reinforces the lack of predictability in its outcome” (Bouchikhi, 1993, p559).

Sabotage: “... [T]he entrepreneur often makes no productive contribution at all, and in some cases plays a destructive role, engaging in what Veblen described as ‘systematic sabotage’ of production” (Montanye, 2006, p554).

Fuzzy knowledge: “Individuals become entrepreneurs through their comparative advantage at systematically using knowledge to eliminate and reduce some uncertainty outright and to transform other bits into manageable risk. The entrepreneur’s diverse stock of fuzzy knowledge never becomes public or depleted, so it is a source of ongoing profits” (Montanye, 2006, p564).

Bullshit and deceit: “The art of persuasion – a combination of honest rhetoric, ‘bullshit,’ and abject deceit – emerges as one of the entrepreneurs’ most valuable talents. It is the means by which individuals operating in a complex world pitch themselves . . . “ (Montanye, 2006, p566).

Cyclothymic: “In the entrepreneurial theater of need for control, a sense of distrust, a desire for applause, and resorting to primitive defensive mechanisms . . . ‘the manic defenses’ appear to be common. The behaviors of

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a number of entrepreneurs also seems to have a cyclothymic quality” (deVries, 1996, p853).

**Feeling different:** “The experience of feeling different seems to have an important influence on entrepreneurs. If the family of the entrepreneur does not seem to fit into the established order of things, their offspring may have little choice but to create a new niche for themselves in society” (deVries, 1996, p856).

**Allergic to authority:** “Many entrepreneurial individuals counteract feelings of low self-esteem, inferiority, and helplessness through excessive control and activity. It also seem that many of these people cannot function in structured situations. They appear to be allergic to authority” (deVries, 1996, p857).

**Rebel:** “the enterprise also symbolized his abilities to rebel. Setting up an enterprise somehow becomes a personalized statement of separation” (deVries, 1996, p871).

**Tails of distribution:** “Being innovators and idiosyncratic, entrepreneurs tend to defy aggregation. They tend to reside at the tails of population distributions, and though they may be expected to differ from the mean, that nature of these differences are not predictable” (Bull and Willard, 1993, p186-7).

**Disjointed:** “But that model does not describe entrepreneurship’s disjointed events that disrupt stability” (Bull and Willard, 1993, p187).

**Chaotic behavior:** “. . . a fundamental equation for population-ecology theory exhibits chaotic behavior that resembles entrepreneurship” (Bull and Willard, 1993, p187).

These words used to describe the entrepreneur’s capability to effect change by being different and challenging the status quo can also succinctly be stated as deviant behavior.

Deviant behavior is an analytical framework that provides an explanation for change-effecting behavior. Some may object to the use of the word “deviant,” and their objection is understandable. No business school would advertise that it is are educating students to be deviants? Unfortunately, eliminating the word, “deviant,” from the discussion of entrepreneurship also eliminates a concept from the discourse about entrepreneurship that may be central to our understanding of entrepreneurship causing scholars to use other words like: outlier, marginalized, driven outsider, rebel, cyclothymiacs, and chaotic behavior. In order to avoid a Type I error of rejecting a concept that might represent entrepreneurship, this paper will put aside the negative feelings and attitudes towards the word deviant in order to focus on the underlying concepts and principles of deviant behavior that can help to
expand the discussion and examination of entrepreneurship. Likewise, this paper rejects the notion that socially unacceptable behaviors are the only outcomes of deviance. Instead, this paper accepts the belief that deviant behavior can result in either a benefit or a cost to society and views deviant behavior as a potential explanatory variable.

**Entrepreneurship and Deviant Behavior**

What commonalities do entrepreneurship and deviant behavior share? Both deal with the concerns of varying from the status quo by doing things differently. In fact, many of the most admired entrepreneurs were considered outcasts during the early stages of their careers. Interestingly, once these outcasts succeed, many of their ventures establish a new operating normal for their respective industry, and their venture established a new status quo. Fred Smith, i.e., Fed-X is one of a long list of entrepreneurs that created a new status quo.

Is deviant behavior an appropriate word to use to explain the entrepreneurship phenomenon? Except for the public’s negative connotation attached to the word deviant, scholars in the field do not presume only a negative perspective of deviance. Instead they ask what it means to be different or to deviate from the status quo and place deviance within a social context. In fact, several scholars profess the need for deviant behavior in order to have a vibrant society.

Deviant enterprise, and the persons who engage them, are almost by definition troublesome and disruptive. . . . We do not for a moment wish that we could rid ourselves of deviant phenomena. We are intrigued by them. They are an intrinsic, ineradicable, and vital part of human society (Matza, 1969, p17).

Adler and Adler (2007) provide four insights regarding deviant behavior that are relevant to our understanding of entrepreneurship: an entrepreneur that effects change by challenging the status quo while accepting the role as an outsider, outlier, or rebel. In particular, Adler and Adler discuss the status quo, feeling different, risk, and overachieving from the perspective of deviant behavior:
Challenge versus conformity to the status quo:

“Perhaps we can conclude, then, that two separate yet often competing currents are found in any society: those forces which promote a high degree of conformity among the people of the community so that they know what to expect from one another, and those forces which encourage a certain degree of diversity so that people can be deployed across the range of group space to survey its potential, measure its capacity, and, in the case of those we call deviant, patrol its boundaries. In such scheme, the deviant would appear as a natural product of group differentiation.” (Adler and Adler, 2006, p22)

Feeling Different

“The problem lies in the social structure in society, where even if people follow the approved means, there are ‘roadblocks’ prohibiting them from rising though the stratification system. Deviant behavior occurs when socially sanctioned means are not available for the realization for highly desirable goals.” (Adler and Adler, 2006, p48)

Risk

“The idea, then, is that the person invest time, energy, himself, in a certain line of activity – say, getting an education, building up a business, acquiring a reputation for virtue. When or whenever he considers deviant behavior, he must consider the costs of this deviant behavior, the risk he runs of losing the investment he has made in conventional behavior.” (Adler and Adler, 2006, p79)

Overachieving (Over-conforming, Positive Deviance)

“Deviance has traditionally been regarded negatively, as failure to confirm to the norm of acceptability. Heckert and Hecker build on previous conception of ‘positive deviance’ which earlier suggested that people can be regarding as deviant through an excessive pro-social behavior, such that they come to be regarded as excessively altruistic, charismatic, innovative, conformist, or innately gifted.” (Adler and Adler, 2006, p32)

“Mother Theresa was almost universally proclaimed as a positive deviant, a person who overconformed on norms of altruism and charity and was almost unanimously appraised in a positive manner, as a saintly woman.” (Adler and Adler, 2006, p39)

Interestingly, scholars outside the field of entrepreneurship present Mother Theresa as a positive deviant when the field of social entrepreneurship considers Mother Theresa to be a social entrepreneur: “Mother Teresa was undoubtedly one of the foremost social
entrepreneurs of our times.” (Web #1) John Hope Bryant stated it more succinctly when he
spoke at Berea College in 2006: “He (John Hope Bryant) left the audience with a reminder
of ‘all the crazy people who have changed the world,’ giving such examples as Martin
Luther King Jr., Nelson Mandela, Mother Theresa and Jesus Christ” (Web #2).

Certainly, not all entrepreneurs are “troublesome and disruptive,” but rather vary in
intensity along some dimension, such as, entrepreneurial orientation. In a similar manner, so
does deviant behavior. Conceptually, Figure 1 expresses deviant behavior on a continuum.

![Figure 1 – Deviant Behavior Dimension](image)

In addition, literature shows a linkage between deviant behavior and
entrepreneurship, e.g., the connection between juvenile delinquency and entrepreneurial
behavior that resulted in new products or services. The following two sources illustrate that
linkage:

(1) Belmont University’s Center for Entrepreneurship reports how entrepreneurship was
used as a path out of gang life:

Reality TV, Guatemala Style, February 10, 2006: Community leaders
in Guatemala City are looking to entrepreneurship as a path out of gang
life for their young citizens, and hope that a new reality TV show may
create inspiration for this path.
From an AP story at Yahoo News: This gang-plagued Central American nation has found a new twist on reality television, putting wayward youths in a house and filming as community leaders turn them into small business owners. (Web #4)

(2) Off the Books: *The Underground Economy of the Urban Poor* by Sudhir Alladi Venkatesh reports how a poor community survives via an underground entrepreneurship to create a “ghetto economy:”

In this revelatory book, Sudhir Venkatesh takes us into Maquis Park, a poor black neighborhood on Chicago's Southside, to explore the desperate, dangerous, and remarkable ways in which a community survives. We find there an entire world of unregulated, unreported, and untaxed work, a system of living off the books that is daily life in the ghetto. From women who clean houses and prepare lunches for the local hospital to small-scale entrepreneurs like the mechanic who works in an alley; from the preacher who provides mediation services to the salon owner who rents her store out for gambling parties; and from street vendors hawking socks and incense to the drug dealing and extortion of the local gang, we come to see how these activities form the backbone of the ghetto economy.

The above sources illustrate the linkage between negative deviant behavior and entrepreneurship. At one extreme, entrepreneurship channels the negative deviance of gangs to a positive impact. In the latter case, the unregulated, unreported, and untaxed work is accepted as entrepreneurial behavior.

Another example of the connection between entrepreneurship and deviant behavior is presented by Robert K. Metron in his Deviance Typology (Web #6):
Metron explicitly makes reference to an entrepreneur in his explanation of his typology of deviant behavior: An example of conformity is the soldier who protects the status quo; an example of ritualism is the bureaucrat who maintains the status quo; an example of retreatism is the vagrant who is a hobo, tramp or bum; an example of innovation is the entrepreneur introducing change that falls short of a paradigm shift; an example of rebellion is an entrepreneur introducing change that causes a paradigm shift via creative destruction.

**Definitional Sphere of Entrepreneurship**

This paper posits that entrepreneurship is a complex phenomenon and that a three-dimensional perspective of entrepreneurship is better suited to explain the phenomenon for the following three reasons:

1. A sphere has an unlimited number of diameters, i.e., dimensions by which to capture the complexities of entrepreneurship found under different circumstances unlike the limited capacity of the thirty-seven definitions listed in Table 2, each of which only include a few attributes of entrepreneurship with no definition including more than four attributes. In addition, many two dimensional models, such as a flowchart or diagram, suggest a linear, left-to-right, directional flow with a few occasional feedback loops. Models of this type do provide some excellent insights into the entrepreneurship phenomenon, but the factors included in the models are either intended to explain specific activities of an entrepreneur, such as, opportunity recognition, or provide a broad and general overall model that include meta-factors like environment, markets, and firm.

2. A sphere has a core, an underground, with unseen attributes, and a surface that is a function of what lies beneath yet defines the surface, i.e., what is seen. This relationship provides a method for explaining the relationship among many factors,
both obvious factors and not-so-obvious factors that shape particular visible forms of entrepreneurship. The sphere provides an explanation as to why we can’t fully explain, rationally explain, many instances of entrepreneurship.

(3) Finally, a sphere cannot be viewed in its entirety from any one perspective. Its surface, or terrain, can look significantly different depending upon a person’s perspective. The essence of the phenomenon is the same except it is exhibited within a different context or market, under different circumstances with different resources, and for a different purpose or intended outcome. When seen from this perspective, the definitions or understanding of essentially the same phenomenon would result in different explanations.

(Insert “Definitional Sphere of Entrepreneurship”)

The remainder of this paper will explain the following three possible dimensions of entrepreneurship to illustrate the Definitional Sphere of Entrepreneurship: markets, benefits, and impact; and three sphere attributes: The core, two hemispheres, and the terrain.

**Three Sphere Dimensions**

**Market:** The nature of markets directly impact the entrepreneur’s attempt to create a venture within that market and will cause entrepreneurship to be defined differently. If the market is competitive with low barriers to entry and readily available resources, then the start-up effort and risk is low and the entrepreneur is simply using under-utilized resources. Starting another bakery is a good example of a low-barrier business in a relatively open and competitive market. If the right location is selected and quality products are provided, the business should both survive and succeed. Conversely, if the market is closed with only one or two dominate firms who have created high barriers to entry due to scale and propriety rights, then the entrepreneur would need an innovative business model backed by considerable financing and an exceptional person to tilt the scales in his or her favor.
Netflix is a good example of a start-up firm that changed the prevailing business model and almost pushed the incumbent giant into bankruptcy. Words from Schumpeter’s definition, creative destruction, would certainly apply to Netflix strategy. The question is whether the above two scenarios describe essentially the same entrepreneur or two different types of entrepreneurs. Upon reflection, it appears that the above describes two distinctly different types of entrepreneurs since it would be hard to imagine Reed Hastings, the founder of Netflix, to start-up a single retail outlet and vice versa. However, both are entrepreneurs.

**Benefit:** A second dimension of the entrepreneurship phenomenon is benefit. Who benefits from entrepreneurship? Who is the intended beneficiary: the individual or society? One could argue that society benefits from every successful venture, but the key question for this dimension is the intended beneficiary. Social entrepreneurship and a life-style business are good examples of the two extremes of this dimension. The field of social entrepreneurship is filled with many excellent examples of entrepreneurs creating non-profit enterprises to help solve social problems that markets and governments fail to solve. Conversely, the professional industries, such as accounting and consulting, have many new firms founded by experienced people who tired of working for a major firm in their industry. Many lifestyle businesses are examples of individuals seeking a better alternative to life within the confines of a large organization. As above, this dimension can be used to create different definitions of entrepreneurship as a function of the intended beneficiary of the entrepreneurial intentions.

**Impact:** The third dimension is impact. What is the result sought by the entrepreneur who is pursing a benefit within a market? Is the intended impact personal: an increase in value? Is the intended impact business: economic growth? At one extreme the impact is subjective while at the other extreme the impact is objective. Examples of these two extremes would include entrepreneurs who seize an opportunity and pursue it “regardless of
the resources currently controlled” (Timmons, 1994, p7) at one extreme versus the fact that start-ups will continue to occur in significant numbers regardless of the likelihood of success, i.e., population ecology. In some cases, the impact will be intentional because the entrepreneur is pursuing a specific opportunity. In other cases, entrepreneurship will have an impact because a lot of people are always eager to start a business; some will succeed while many will fail. However, it is believed that economic growth will occur as a function of the churning of entrepreneurial activity. Certainly the perception of entrepreneurship differs at the two extremes.

Three Sphere Attributes

In addition to the above three dimensions, the sphere has three other important attributes that help explain entrepreneurship phenomenon. The sphere attributes are: the core, the two hemispheres, and the sphere’s surface.

The Core: Deviant behavior provides an explanation of the source of change for all dimensions. Deviant behavior literature provides evidence of the alignment between the phenomena of deviant behavior and entrepreneurship through the discussion of change. Leading scholars in the field have reflected upon the nature and phenomenon of deviant behavior, and their explanations of deviant behavior are similar to the description of a status-quo breaking entrepreneur:

Change is a reality. Reality is structured out of our definitions and interpretations. Definitions of deviance come from a variety of sources. The study of deviance entails developing an understanding of the processes of change and developing an awareness of how definitions of reality are negotiated in everyday life situations” (Web #8).

“Deviance is a negotiated order. Deviance violates some group’s assumptions about reality (social order). It violates expectations. The definition of deviance defines the threat and allows for containment and control of that threat. The definition of deviance preserves, protects, and defines group interests and in doing so maintains a sense of normalcy. Deviance is a product of social interaction” (Web#9).
The dynamics of this change provides an explanation of the different instances of entrepreneurship seen on the sphere’s surface, i.e., the terrain of entrepreneurship. For example, the intensity of an entrepreneur’s desire to vary from the status quo can explain the difference between a life-style business versus social enterprise, between the start-up of a “Netflix” versus a new corner bakery, between the personal desire to pursue an opportunity versus the collective desire to pursue opportunities. Deviant behavior provides an explanation of the movement between the extremes of each dimension. In some cases entrepreneurs revolutionize markets. In other cases, entrepreneurs revitalize old businesses in established markets.

Two Hemispheres: A sphere has two hemispheres and both hemispheres can help to explain the entrepreneurship phenomenon. The northern hemisphere is called “transformational” and identifies an arena where ventures successfully challenge the status quo to transform the prevailing business model or market. Examples of these firms are found along the market and benefits dimensions and include non-profit ventures started by social entrepreneurs as well as private-sector firms such as Netflix and Fed-X. The southern hemisphere is named “transactional” and identifies an arena where ventures are created to improve the efficiency or effectiveness of the existing business models to make incremental improvements in the market structure. Examples of these firms are also found along the market and benefits dimensions and include the new corner bakery or small accounting firm. The impact dimension intentionally lies at the mid-point between the two hemispheres because ventures created as a function of this dimension can be a combination of either hemisphere.

Sphere’s Surface: Terrain of Entrepreneurship: The Terrain of Entrepreneurship is the most exciting aspect of the Definitional Sphere of Entrepreneurship, because the
sphere’s surface is a function of both the underlying and unseen dimensions of entrepreneurship as well as the forces of market, competition, and economic acting upon it during venture formation and growth. As with the global terrain, the Terrain of Entrepreneurship will appear differently as a function of its sources, the context in which it is occurring, and parochial forces acting upon it. Thinking about the entrepreneurship phenomenon in this way provides a more inclusive framework within which to understand the phenomenon and to discuss the numerous definitions of entrepreneurship.

**Conclusion**

How we think about a phenomenon directly impacts our investigative techniques and our findings. Thinking about a phenomenon from a one- or two-dimensional perspective may be appropriate in some cases. However, this paper posits that entrepreneurship is a dynamic process as well as a unique event of creation and requires a three-dimensional perspective to understand the phenomenon. The primary purpose of this conceptual paper is to introduce the concept of a three-dimensional perspective when thinking about the entrepreneurship phenomenon. The secondary purpose of this paper is to shift our search for a definition away from the “battle of the definitions” or the “definition of convenience” approaches to a more reflective approach that searches for the underlying dimensions, i.e., constructs, that might explain the phenomenon of entrepreneurship.

The study of entrepreneurship must move beyond the confines of any one discipline, because entrepreneurship is a phenomenon created at the nexus of markets, people, and process (use earlier quote) and should not be considered as the exclusive domain of any particular discipline.


Internet Sites

Web #3: http://www.iadb.org/IDBAMERICA/Archive/stories/2000/eng/AGO00e/e800g.htm
Web #4: http://forum.belmont.edu/cornwall/archives/004558.html
Web #5: http://www.bherc.org/pdf/EXIT_STRATEGIES.pdf
Web #7: www.umsl.edu/~rkeel/200/defdev.html, page 4 of 5
Web #8: www.umsl.edu/~rkeel/200/defdev.html, page 5 of 5
Web #9: www.umsl.edu/~rkeel/200/intrdev.html, page 2 of 4

Illustration drawn by Graphic Design and Illustration by Bradley Merriman, Gurnee, Illinois
<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1755</td>
<td>Cantillon</td>
<td>Entrepreneurs buy at certain prices in the resent and sell at uncertain prices in the future. The entrepreneur is the bearer of uncertainty.</td>
</tr>
<tr>
<td>1816</td>
<td>Say</td>
<td>The agent who unites all means of production and who finds in the value of the products... the re-establishment of the entire capital he employs, and the rent which he pays, as well as the profits belonging to himself.</td>
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<tr>
<td>1921, 1942</td>
<td>Knight</td>
<td>Entrepreneurs attempt to predict and act upon change within markets. The entrepreneur bears the uncertainty of market dynamics.</td>
</tr>
<tr>
<td>Year</td>
<td>Author</td>
<td>Quote</td>
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<tr>
<td>1922</td>
<td>Lavington</td>
<td>In modern times the entrepreneur assumes many forms. He may be a private businessman, a partnership, a joint stock company, a cooperative society, a municipality or similar body.</td>
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<tr>
<td>Year</td>
<td>Author</td>
<td>Definition</td>
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<tr>
<td>1954</td>
<td>Walras</td>
<td>The entrepreneur is co-ordinator and arbitrageur.</td>
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<tr>
<td>1959</td>
<td>Penrose</td>
<td>Entrepreneurial activity involves identifying opportunities within the economic system.</td>
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<tr>
<td>1959</td>
<td>Cole</td>
<td>The purposeful activity (including an integrated sequence of decision) of an individual or group of individuals, undertaken to initiate, maintain, or aggrandize a profit-oriented business unit for the production or distribution of economic goods and services.</td>
</tr>
<tr>
<td>1959</td>
<td>Hartman</td>
<td>A distinction between manager and entrepreneur in terms of their relationship to formal authority in the industrial organization. The entrepreneur may justify his formal authority independently or he may describe it as delegated from others, notably from the stockholders. But within the organization he alone is the source of all formal authority. Management is defined residually as &quot;not being the source of all authority.&quot; The borderline between the entrepreneur and the manager is thus relatively precise.</td>
</tr>
<tr>
<td>1961</td>
<td>McClelland</td>
<td>Someone who exercises some control over the means of production and produces more than he can consume in order to sell (or exchange) it for individual (or household) income... In practice such people turned out to be traders, independent artisans and firm operators.</td>
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<tr>
<td>Year</td>
<td>Author</td>
<td>Definition</td>
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<tr>
<td>1963</td>
<td>Davids</td>
<td>Founders of new business</td>
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<tr>
<td>1965</td>
<td>Litizinger</td>
<td>The distinction is drawn between &quot;entrepreneurs&quot; who are goal and action oriented as contrasted to &quot;managers&quot; who carry out policies and procedures in achieving the goals... Owners of mom and pop motels appear as the entrepreneurial type who have invested their own capital and operate a business.</td>
</tr>
<tr>
<td>1968</td>
<td>Leibenstein</td>
<td>By routine entrepreneurship we mean the activities involved in coordinating and carrying on a well-established, going concern in which the parts of the production function in use (and likely alternatives to current use) are well known and which operates in well established and clearly defined markets. By N-entrepreneurship we mean the activities necessary to create or carry on an enterprise where not all the markets are well established or clearly defined and/or in which the relevant parts of the production function are not completely known.</td>
</tr>
<tr>
<td>1969</td>
<td>Wainer and Rubin</td>
<td>The entrepreneur in McClelland's scheme is &quot;the man who organizes the firm (the business unit) and/or increases its productive capacity.&quot;</td>
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<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Definition/Description</td>
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<tr>
<td>1970</td>
<td>Collins and Moore</td>
<td>We distinguish between organization builders who create new and independent firms and those who perform entrepreneurial functions within already established organizations. Perhaps we are, after all, thinking of the entrepreneur in the way Schumpeter viewed him: “everyone is an entrepreneur only when he actually ‘carries our new combinations’ and loses that character as soon as he has built up his business.”</td>
</tr>
<tr>
<td>1970</td>
<td>Hornaday and Bunker</td>
<td>The “successful” entrepreneur was an individual who had started a business, building it where no previous business had been functioning, and continuing for a period of at least 5 years to the present profit-making structure…with 15 or more employees.</td>
</tr>
<tr>
<td>1971</td>
<td>Hornaday and Aboud</td>
<td>The “successful entrepreneur” was defined as a man or a woman who started a business where there was none before, who had at least 8 employees and who had been established for at least 5 years.</td>
</tr>
<tr>
<td>1971</td>
<td>Palmer</td>
<td>…the entrepreneurial function involves primarily risk measurement and risk taking within a business organization. Furthermore, the successful entrepreneur is that individual who can correctly interpret the risk situation and then determine policies which will minimize the risk involved… Thus, the individual who can correctly measure the risk situation, but is unable to minimize the risk, would not be defined as an entrepreneur.</td>
</tr>
<tr>
<td>Year</td>
<td>Author</td>
<td>Definition</td>
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<td>------</td>
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</tr>
<tr>
<td>1972</td>
<td>Draheim</td>
<td>Entrepreneurship - the act of founding a new company where none existed before. Entrepreneur is the person and entreprenerus are the small group of persons who are new company founders. The term is also used to idicate that the founders have some significant ownership stake in the business (they are not only employees) and that their intention is for the business to grow and prosper beyond the self-employment stage.</td>
</tr>
<tr>
<td>1972</td>
<td>Howell</td>
<td>Entrepreneurship - the act of founding a new company where none existed before. Entrepreneur is the person and entreprenerus are the small group of persons who are new company founders. The term is also used to idicate that the founders have some significant ownership stake in the business (they are not only employees) and that their intention is for the business to grow and prosper beyond the self-employment stage.</td>
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<tr>
<td>1973</td>
<td>Kirzner</td>
<td>The entrepreneur recognizes and acts upon profit opportunities, essentially an arbitrageur.</td>
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<tr>
<td>1974</td>
<td>Liles</td>
<td>We have examined the entrepreneur who is involved in substantial ventures and have considered what we found in light of traditional thinking that he is a special type of individual—somehow and unusual and uncommon man—a man apart. It probably is true that very successful entrepreneurs become men apart. But, at the beginning, when they make the decision to start an entrepreneurial career, they are in most respects very much like many other ambitious, striving individuals.</td>
</tr>
<tr>
<td>1980</td>
<td>Lachman</td>
<td>The entrepreneur is perceived as a person who uses a new combination of production factors to produce the first brand in an industry.</td>
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<tr>
<td>1980</td>
<td>Brockhaus</td>
<td>An entrepreneur is defined as a major owner and manager of a business venture not employed elsewhere.</td>
</tr>
<tr>
<td>1980</td>
<td>Hull, Bosley, and Udell</td>
<td>A person who organizes and manages a business undertaking assuming the risk for the sake of profit. For the present purposes, this standard definition will be extended to include those individuals who purchase or inherit an existing business with the intention of (and effort toward) expanding it.</td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Definition</td>
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<td>------</td>
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</tr>
<tr>
<td>1981</td>
<td>Cooper and Dunkelberg</td>
<td>This paper reports upon what we believe to be the largest and most varied sample of entrepreneurs studied to date. The findings are from a survey of 1805 owner-managers.</td>
</tr>
<tr>
<td>1981</td>
<td>Mescon and Montanari</td>
<td>Entrepreneurs are, by definition, founders of new businesses.</td>
</tr>
<tr>
<td>1985</td>
<td>Drucker</td>
<td>Entrepreneurship is the act of innovation involving endowing existing resources with new wealth-producing capacity.</td>
</tr>
<tr>
<td>1996</td>
<td>Lumpkin and Dress</td>
<td>The essential act of entrepreneurship is new entry. New entry can be accomplished by entering new or established markets with new or existing goods or services. New entry is the act of launching a new venture, either by start-up firm, through an existing firms, or via 'internal corporate venturing.'</td>
</tr>
<tr>
<td>1997</td>
<td>Vankataraman</td>
<td>The discovery, evaluation and utilization of future goods and services.</td>
</tr>
</tbody>
</table>
The field of entrepreneurship involves the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them.

Entrepreneurship is a context dependent social process through which individuals and teams create wealth by bringing together unique packages of resources to exploit marketplace opportunities.

Entrepreneurship is the mindset and process to create and develop economic activity by blending risk-taking, creativity, and/or innovation with sound management within a new or an existing organization.

**Principal Component** | **Words or Statement in Definition.**
--- | ---
**Uncertainty** | Deals with uncertainty; bearer of uncertainty; product function not well known; future goods and services.
**Coordinator** | Unites all production means; combining factors of production; undertake to initiate, maintain, or aggrandize . . . unit for production to create an enterprise. (?)
**Change** | Change: predict and act upon.
**New combinations** | New combination of production factors; carries out new combinations; create unique package of resources.
**Immunity from control** | Immunity from control of rational knowledge.
**Speculator** | Speculator.
**Arbitrageur** | Arbitrageur; trader; acts upon profit opportunities.
<table>
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<tr>
<th><strong>Opportunity</strong></th>
<th>Identify opportunity; sources of opportunity; exploit opportunity</th>
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</thead>
<tbody>
<tr>
<td><strong>Profit-oriented</strong></td>
<td>Profit-oriented business; create wealth.</td>
</tr>
<tr>
<td><strong>Formal power</strong></td>
<td>Source of all formal power; exercises some control.</td>
</tr>
<tr>
<td><strong>Artisans</strong></td>
<td>Independent artisans.</td>
</tr>
<tr>
<td><strong>Firm operator</strong></td>
<td>Firm operator; organizes and manages; major owner and manager of a business venture.</td>
</tr>
<tr>
<td><strong>Founder</strong></td>
<td>New company founder; founders of new businesses; founder; organizes firm; starting a business; new entry.</td>
</tr>
<tr>
<td><strong>Goal/action oriented</strong></td>
<td>Goal and action oriented.</td>
</tr>
<tr>
<td><strong>Founding unique business</strong></td>
<td>Founding a new company where none existed before; building a business where no previous business had been; started a business where there was none before; doing things that are not generally done.</td>
</tr>
<tr>
<td><strong>Size &amp; Time</strong></td>
<td>Been in business 5 years with 15 employees; in business 5 years with 8 employees.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Risk measurement; risking taking; minimize risk.</td>
</tr>
<tr>
<td><strong>Self-employment</strong></td>
<td>Grow beyond self-employment.</td>
</tr>
<tr>
<td><strong>Stake in business</strong></td>
<td>Significant stake in business.</td>
</tr>
<tr>
<td><strong>Purchase or inherit</strong></td>
<td>Purchase or inherit a business with intent to expand.</td>
</tr>
<tr>
<td><strong>Man apart</strong></td>
<td>Special type of individual – somehow an unusual and uncommon man – a man apart; doing things not generally done.</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>Endowing existing resources with new wealth-producing capacity; creativity; future goods and services; act of innovation.</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>Social process; processes: discovery, evaluation, and exploitation; to discover, evaluate and exploit opportunity.</td>
</tr>
<tr>
<td><strong>Business Entity</strong></td>
<td>Businessman, a partnership, a joint stock company, a cooperative society, a municipality; the firm is the entrepreneur; within a business organization; an existing organization.</td>
</tr>
<tr>
<td><strong>Leadership</strong></td>
<td>Comes under the wider aspect of leadership.</td>
</tr>
<tr>
<td><strong>Failure is Possible</strong></td>
<td>If he fails in his understanding of things to come, he is doomed; his success or failure depends on . . . ; upon him rests the responsibility for their success or failure.</td>
</tr>
</tbody>
</table>
Entrepreneurship: A Term of Art

Principal Topic and Research Questions

The paper introduces a three-dimensional perspective for thinking about the entrepreneurship phenomenon and posits that entrepreneurship is both a dynamic process and unique event occurring under significantly different circumstances resulting in different but valid explanations of the phenomenon. Consequently the use of a three-dimensional perspective is more likely to capture the multiple dimensions and the inter-relationships causing the phenomenon. Another purpose of this paper is to shift our search for an understanding of entrepreneurship away from the battle-of-the-definitions or the definition-of-convenience approaches to an approach that provides a more inclusive framework.

Matlay notes that “In practice, . . . , entrepreneurship has entered everyday parlance and, as a generic term, is used in a variety of contexts and it encompasses a broad range of interchangeable meanings and situations” (Matlay, 2005, p666). If an activity involves risk and uncertainty along with some kind of reward, entrepreneurship is the term used to name that activity. In fact, the word entrepreneurship is being used to name a strategy that firms can use to succeed. Several scholars have developed a model to explain how a firm can use entrepreneurship as a strategy (Meyer and Heppard, 2000) while others clearly state that “Entrepreneurship does not exclusively focus on the isolated individual creating a company” (Rispal, Boucler, and Verstaraete, 2007, p2), even though we all recognize that “entrepreneurship is fundamentally personal” (Baum, et al, 2007, p1). In addition entrepreneurship is seen from different perspectives: The general public views
entrepreneurship as the path to independence, ownership, and great wealth; academics view entrepreneurship in terms of behavior, process, attributes, cognition, innovation, and from micro- and macro-economics perspectives; while policymakers focus on the outcomes of entrepreneurship such as job and wealth creation, community development, and quality of life created by the social entrepreneur. Each perspective offers a different definition of entrepreneurship; a different outcome. Are these perspectives opposing or complementary? Are we seeing different faces of the same phenomenon or does each perspective represent a distinctly different phenomenon that we happen to name entrepreneurship for convenience?

Methodology/Key Proposition

“What is entrepreneurship?” has been asked and answered by scholars since Cantillon first used the word in 1755. Many definitions compete and conflict with each other while other definitions are ignored. Little effort is exerted to reconcile that variance. “Indeed, even the OECD itself contributed to the confusion since virtually every study that has focused on entrepreneurship has presented a different definition of the term” (Ahmad and Seymour, 2008, p5). How can so many well-intended definitions of entrepreneurship exist if we are all observing the same phenomenon?

What is the phenomenon represented by the word entrepreneurship? The challenges of finding the best definition of entrepreneurship are daunting. A common approach to seeking the best definition is to engage in lengthy and reflective discussions in order to identify a set of attributes that best fit the scholar’s observations of entrepreneurship. This approach can be called the battle-of-the-definitions, i.e., whoever presents the most compelling definition
“wins” the battle. Or, many scholars create a definition-of-convenience by stating the definition of entrepreneurship used for their particular study and leave it to the reader to determine the appropriateness of the definition, or simply “bypass the discussion of entrepreneurship definitions altogether, and simply equate entrepreneurship to a specific empirical measure . . .” (Ahmad and Seymour, 2008, p5). This paper documents thirty-seven distinctly different definitions of entrepreneurship spanning nearly 250 years of scholarship. A key question at this point is to ask ourselves whether we are seeking the best definition of the word entrepreneurship or searching for the best explanation of the phenomenon.

This paper forsakes the search for a single, best fit, definition of entrepreneurship. Instead, this paper posits that the multiple perspectives will provide a more in-depth understanding of entrepreneurship by making the presumption that many present definitions represent valid perspectives of the entrepreneurship phenomenon.

Instead of rejecting some concepts in order to craft the most cogent definition, this paper will attempt to include divergent and apparently different perspectives into a common framework to help explain entrepreneurship. The underlying rationale for seeking a three-dimensional explanation of entrepreneurship is based on the belief that entrepreneurship is a multi-faceted phenomenon resulting from the interplay among person, task, and environment (Shane 2003, p4) (Baum, et al, 2007, p315). However, by focusing on the “narrow aspects of what the phenomenon of entrepreneurship is, . . . , seems to be driving out a more complicated and comprehensive understanding of (the) phenomenon of entrepreneurship” (Baum, et al, 2007, p326) at a time when complexity or “differentiated traditions” as Ahmad and Seymour stated in their 2008 article may partly explain the difficulty of crafting a single definition.
Contributions

So why should we care whether there is any commonality among the prevailing definitions? Why should we search for a more inclusive framework? The answer, simply stated, is that entrepreneurship is the term of art for all who study and teach it, and like every
other discipline, a field’s terms of arts are the specialized vocabulary that have specific meaning within the field and upon which new knowledge is built. This paper posits that the field of entrepreneurship is in danger of losing its most important term of art as it slips into use as common business jargon.
Factors Influencing the Success of Graduate Enterprises: Evidence from the Malaysian Graduate Entrepreneur Program

Saridan Abu Bakar

Abstract
This study was conducted to understand the underlying factors that contribute to the success of graduate entrepreneurs who participate in the government sponsored Graduate Entrepreneurship Scheme (GES) and receive financial support from the Graduate Entrepreneur Fund (GEF). Adopting the grounded theory approach, this study found the dynamics of customer satisfaction, product quality, networking, business image, location, diversification and committed workforce as particularly dominant in impacting graduate enterprise success. To these findings, the various factors that constrain accomplishment can be added. Foremost among these, the study found adaptation to technological changes and the availability and lack thereof of capital, employees and space as pertinent. This qualitative endeavor also managed to develop a conceptual framework of useful information on the factors investigated.

Keyword(s): Business Constraints, Graduate Entrepreneurs, Grounded theory, Malaysia, Qualitative Study, Success

INTRODUCTION

The Graduate Entrepreneurship Scheme (GES) is an entrepreneurship training program aimed at creating a new echelon of entrepreneurs among the graduates in Malaysia. This program, which was conceived in 1998, is conducted by the Malaysian Entrepreneurship Development Centre (MEDEC) of Universiti Teknologi MARA (UiTM) and funded by the Ministry of Entrepreneur and Co-operative Development (MECD) through the National Institute of Entrepreneurship (INSKEN). Up till 2008, GES has trained close to 6,000 graduates from various local and international institutions of higher learning recognized by the government (Utusan Malaysia, 2008). The main aim of GES is to develop and heighten the knowledge and skill of graduate entrepreneurs. Its 6-day training program primarily focuses on the honing of business planning skills of participants and the dissemination of useful information on the availability of business support and opportunities in the country. The participants are also given a basic grounding in entrepreneurial theories and motivation.
The comprehensive modules of the program provide not only a familiarization of the more important aspects of entrepreneurship but also an opportunity for budding entrepreneurs to network with their peers as well as governmental support institutions that outfit various infrastructure and amenities for the development of entrepreneurship in the country. The training is made available to all graduates aged 35 years and below who have graduated not more than 10 years before.

After the successful completion of the course, the participants may avail themselves of loans that are specifically set aside for graduate entrepreneurs. The government funded Graduate Entrepreneur Fund (GEF) under the MECD provides the successful participant with the required capital to start a new business or to enlarge an existing one. The government had made an initial allocation of RM5 million to this fund in 1998 and up till 2008 the allocated total had reached RM100 million. The actual money itself is being disbursed by Small and Medium Enterprise Bank (SME Bank). GEF offers loans amounting from RM20,000 to RM250,000 for the purchase of fixed assets and as operating capital up to a maximum of 80 percent of the total project cost. The loans come with a lenient payback period of maximum 7 years and at a flat rate of 5 percent yearly interest.

**Problem Statement**

This research was carried out in the context of the ongoing emphasis by the government to develop graduate entrepreneurs particularly through the MECD. It has been shown by a study conducted by Mohamad (2008) that the GES training program under the auspices of the MECD has not lived up to its expectation. Among the indicators cited for the dreary performance is the failure of many training participants to obtain loans from GEF since its inception in 1998 (Utusan Malaysia, 2008). After nine years, only 10 percent of the 6,000 odd trainees had been able to obtain financial aid from GEF. Hence, the espoused objective of GES in generating a class of graduate entrepreneurs is shown to be less than satisfactory. In a recent study by Universiti
Teknologi Malaysia (UTM) on 348 GES past participants, it was found that only 49 percent have become entrepreneurs (UTM, 2009).

Research Question and Objective

This research is an attempt at answering the question of what enterprise factors are instrumental in influencing the success of graduate entrepreneurs in Malaysia, thereby injecting new information on a relatively unexplored topic to the existing corpus of materials on entrepreneurship.

Methodology

The approach taken by this research is tailored to respond to the main research question: “What enterprise factors contribute to the success of graduate enterprises in Malaysia?” It utilizes a qualitative method of data collection, analysis and interpretation. Due to the relatively uncharted nature of the research subject, this study yields itself to the postulation made by Merriam and Simpson (2000) who referred to grounded theory as particularly suited to examine a phenomenon about which little is known. Moreover, grounded theory is also capable of generating new and exciting ideas from an otherwise already exhaustively investigated subject (Strauss and Corbin, 1994). By choosing grounded theory, this research therefore stands to gain not only from its exploratory character but also the new insights that it makes available as well.

Data Collection

Data were collected in the form of transcripts of eight in-depth interviews with graduate entrepreneurs and supplemented by field notes. These materials represent the respondents’ opinions, ideas and perceptions of the enterprise factors that contribute to their success.

Sampling
Random samples are of little use in a qualitative research such as this. Rather, the emphasis
in on purposeful, or theoretical sampling, in which the researcher seeks out the informants that can
provide the richest and most detailed data on the subject in question (Patton, 2002; Seidman, 1991).
Since the focus is on collecting detailed and in-depth information, the number of respondents was
kept small. The main criterion for judging sample size is that of saturation of information. When
the researcher begins to hear the same theme being reported over and over again and no longer
learns anything new from participants, it is evident that a category is saturated (Glaser and Strauss,
1967), and thus data collection is complete.

**Respondents Selection and Process**

The sampled graduate entrepreneurs were approached directly and invited by the researcher
to participate in in-depth face-to-face interviews. These respondents were referred to by SME Bank
and had been categorized as successful and good paymasters. They were first contacted by SME
Bank to seek their consent to participate in the study. In total, eight semi-structured in-depth
interviews were successfully conducted. A code name was established for each respondent, as
shown in Table 1.

<table>
<thead>
<tr>
<th>Code name</th>
<th>Gender</th>
<th>Type of Business</th>
<th>Product</th>
<th>Start-up Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent 1</td>
<td>Female</td>
<td>Trading</td>
<td>Lubricants</td>
<td>2006</td>
</tr>
<tr>
<td>Respondent 2</td>
<td>Male</td>
<td>Service</td>
<td>Child Development Centre</td>
<td>2006</td>
</tr>
<tr>
<td>Respondent 3</td>
<td>Female</td>
<td>Service</td>
<td>Tuition Centre</td>
<td>2005</td>
</tr>
<tr>
<td>Respondent 4</td>
<td>Male</td>
<td>Service</td>
<td>Printing</td>
<td>2004</td>
</tr>
<tr>
<td>Respondent 5</td>
<td>Male</td>
<td>Service</td>
<td>Travel Agent</td>
<td>2006</td>
</tr>
<tr>
<td>Respondent 6</td>
<td>Female</td>
<td>Service</td>
<td>Beauty Saloon and Spa</td>
<td>2005</td>
</tr>
<tr>
<td>Respondent 7</td>
<td>Male</td>
<td>Service</td>
<td>Hair Saloon</td>
<td>2007</td>
</tr>
<tr>
<td>Respondent 8</td>
<td>Female</td>
<td>Service</td>
<td>Executive Training</td>
<td>2005</td>
</tr>
</tbody>
</table>
Validity and Trustworthiness of the Study

In this study, a whole gamut of procedures was utilized to ensure that the information provided by respondents is true and accurate and that the analysis of data was systematic, intensive and valid. Member checking was carried out to validate interview transcriptions; triangulation to synthesize data and strengthen interpretation; thick description to ensure that every theme that emerges from the study convey similar meaning to both respondents and researcher; and firsthand reporting as suggested by Miles and Huberman (1994) and field notes to ensure the integrity of information gathered. In addition to all these, a participatory method of research, as suggested by Merriam (1998) was used in both the semi-structured interviews and the informal interactions between the participants and the researcher. To further strengthen the whole process, peer review and identification of researcher bias were also carried out.

Results of Cross Case Analysis

Drawing from the in-depth interviews with eight graduate entrepreneurs, 121 themes emerged. These themes can be segregated into three main classifications: Enterprise Success, Enterprise Factors and Constraints.

Enterprise Success

Since the fundamental research question deals with the factors that contribute to the success of Malaysian graduate entrepreneurs, it is only to be expected that a lot of discussion during the in-depth interviews would revolve around the definition of success. Reacting to open ended questions on this matter, the respondents gave many and diverse answers as to what constituted success from their respective viewpoints. As a whole, this study noticed that both quantitative and qualitative methods have been used by the graduate entrepreneurs to measure their success. Quantitative
measures quoted by the respondents are growth in sales, growth in assets, growth in the number of employees and business profitability. Survivability and personal satisfaction are two qualitative measures mentioned by them as well. In general, these findings echo previous studies on objective measures (Sexton, Upton, Wacholtz, and McDougall, 1997) and subjective measures (Ibrahim and Goodwin, 1986; Cooper and Artz, 1995). Personal satisfaction as a business success measure was discussed by Clarkson (1995).

Growth in sales appears to be the common denominator of success among entrepreneurs. Respondent 3, a tuition centre operator, remarked, “This year’s growth has been steady…There has been a marked increase [in students] as compared to last year and the two years before that.” (Personal communication, 2nd September, 2008). To respondent 7, owner of a hair saloon, “[It has been] one year and seven months [of operations] and the graph is showing an upward trend. As we progress, more [customers] are coming in.” (Personal communication, 16th September, 2008). Growth in sales, according to Respondent 4, a printing outlet operator, is contributed by new and large corporate customers on top of existing regulars. Respondent 6 resorts to providing monetary incentives to employees as a way of inducing higher sales. “In fact [the staff] now has sales target to meet. With this target the staff is spurred to perform better and be rewarded. This is a healthy form of competition among the employees to boost sales.” (Personal communication, 15th September, 2008).

The success of a business is also measured in terms of increase in business assets. In this regard, Respondent 4 had this to say: “We feel that we have been successful; from the very start we did not anticipate owning such a big machine as this. This is the first asset!” (Personal communication, 4th September, 2008). Past studies mostly equate increase in staff level to higher cost of operation and hence, lower business profitability. This view, however, is not shared by the graduate entrepreneurs. Conversely, these entrepreneurs are of the conviction that an increase in people level is a clear testimony of the success of the business. “Success is when you are able to provide job opportunities to people. This is visible success,” said Respondent 4.
Financial profitability emerged as another popular measure of success for the graduate entrepreneurs. To them, profitability contributes to the income of shareholders as well as to the fund that will be used for future growth. According to Respondent 6, “Profit is the investor’s return on investment. It is the all encompassing index that incorporates sales and other factors.” (Personal communication, 15th September, 2008). The ability to survive in the market place is yet another measure of success used by them. This is hardly surprising given the relatively short spell of time that these entrepreneurs have been in business. Since the respondents, on average, have been in business for just over three years, they are unanimous in regarding survivability as of utmost priority during the formative period. “In these two years, it is sufficient that we survive.” (Respondent 1, personal communication, 16th August, 2008). A business that survives, according to Respondent 3, is one that can cover all of its cost of operation that includes wages and rent. Additionally, a survivor business must also be able to fend off competitors. The entrepreneurs realized that they also need to strive and be more attentive to their business in order to survive. Self satisfaction plays a major role in spurring the entrepreneurs and is an important indicator of their success as well. Nash (1983), stressed that a business needs to succeed in order to survive. Like any other businesses, the success of small and medium sized ventures (SMEs) therefore depends on measurable gains such as growth in sales, workforce, capital and profit. Specific to this study, measurement indices in the form of sales growth, increase in workforce, increase in assets, levels of profitability, business survivability and entrepreneur satisfaction have been found to be the dominant measures used by the graduate entrepreneurs.

**Enterprise Factors**

Certain aspects relating to the business have been identified by the respondents as vital in determining the success of their ventures. These factors are customer satisfaction, product differentiation, niche products, networking with other businesses, business image, strategic location, diversification and worker dedication.
Customer Satisfaction

A majority of the respondents (7 out of 8) vouched that their businesses become successful because of the superior service that they provide to customers. Respondent 4, for example, said, “First customer that we tried to engage, for example, was UIA[M] where I proved my worth until the [vice] chancellor was happy with us.” (Personal communication, 4th September, 2008). Additionally, the respondents were convinced that a happy customer who is satisfied with the product or service offering will continue to support the business. On this, Respondent 7 said, “I hate to push [the] customer to sell my service. I also told my staff not to. If they [our customers] wish to do so, then it is up to them to [advertise] to other [customers]…” (Personal communication, 16th September, 2008). Repeat customers are important to entrepreneurs because they tend to spend more money, generate larger transactions, refer more customers, and buy a broader range of products than one-time shoppers. Hence, entrepreneurs are desirous to retain them as much as possible. This fundamental truth was hinted at by Respondent 5, “…with customers being aware of how both of us work…they use us and they will repeat.” (Personal communication, 12th September, 2008).

An effective strategy to retain customers adopted by the entrepreneurs is through continuous improvement to the quality of the product or service. Under this strategy, the entrepreneur continuously monitors customer satisfaction levels, follows strict quality maintenance standards and ensures that customers get the best. Commenting on this, Respondent 4 said, “When a customer is happy with a person, all his [or] her subordinates will follow suit. [These subordinates] do not look at the company. Suffice that they rely on their leader’s assessment, whether he or she is happy with a particular person.” (Personal communication, 4th September, 2008).

Product Quality
There are four aspects relating to product quality that contribute to the entrepreneurs’ success: product differentiation, niche products, product improvement and constant offering of new products. Product differentiation alludes to the practice of distinguishing the differences inherent in a product or service in order to make them more attractive to a particular target market. By doing this, the entrepreneur hopes to effectively thwart competition and gain a bigger share of the market. “We distinguish ourselves, we bring [distinguished products] to the market, we still do business…I always belief that it is [in] differentiating yourself.” (Respondent 8, personal communication, 25th September, 2008). By highlighting the unique aspects of a product, differentiation also creates a sense of value. According to Respondent 2 (personal communication, 27th August, 2008), “Others don’t have a swimming pool, we put up one. [We created] a new playground based on the latest model. Others’ are obsolete and dilapidated. The premise color is a striking purple!”

A niche product is a specialized offering that meets the need of a particular, if not small, market. As a strategy, creating a niche product is a means of getting ahead of the pack by identifying specialized demands in the marketplace that are under-supplied. According to Respondent 6, “There are many expatriates…many Koreans and Iran[ians]. And the Malays of the middle to high class too..” (Personal communication, 15th September, 2008). In satisfying the needs of customers, the graduate entrepreneurs do product improvements, often without regards to pricing change. By making improvements, products and services can become more pleasing, more versatile and more efficient, thus increasing their appeal to a larger market of consumers. “I don’t compete in pricing. I just place my own price,” said Respondent 2. In addition, “The customer, if he is satisfied, he won’t mind at all. What is more important is that we maintain a standard price but offer extra service to the customers.” (Personal communication, 27th August, 2008). Respondent 8 was more candid when she spoke on the improvement strategy implemented at her training center. “Rather than [a] stand alone project… we do series, we do follow-up, we do coaching, and we measure results.” (Personal communication, 25th September, 2008).
The entrepreneurs also found that constant offering of new products or services to clients leads to increase in their earnings and profitability. “We need to come out with better programs...Programs that will help people make more money...” (Respondent 8, personal communication, 25th September, 2008). Putting herself in the shoes of her customers, Respondent 8 could appreciate the necessity of constantly generating new products or services in order to survive and flourish. “I don’t think we want the same service all the time, right? We want to sell something new...we want to grow.” According to Storey (1994), a business that wishes to prosper must offer products or services that are new and different from those existing in the market place.

**Networking**

For business rookies like the graduate entrepreneurs, one of the greatest challenges is to secure the trust of the customers. This was best voiced out by Respondent 8. “We’re nobody in the market. People asked you how many companies have you trained? Who have you trained? Just starting. People would think that why would I use my people as experiment for you?” (Personal communication, 25th September, 2008). Hence, it is imperative that the entrepreneurs network with other more reputable businesses. Respondent 8 added, “It [is] just [the] two of us. But we work with other companies as well. Other training providers. So we compliment [each other].” Through this network, her business was able to run despite the limited resource. This finding is in line with earlier studies that showed networking with more renowned organizations as having the impact of heightening the chances of success of a business (e.g. Abu Bakar, 2007; Meeus, Oerlemans, and Hage, 2004; Mian, 1997). In respect to the present study, the researcher found that networking with other businesses or individuals by the graduate entrepreneurs is a strategy undertaken to obtain knowledge which otherwise would not be available to them. In conducting strategic collaborations with other businesses or individuals, the entrepreneurs were also successful in expanding their businesses to new markets.
**Business Image**

Image plays a significant role in ensuring the success of the graduate entrepreneurs’ business efforts. Having a reputable image means that the business would be easily accepted by the market. Furthermore, an image of good standing will attract new customers, who would, in turn, disseminate information on the products and services offered to other potential customers, thereby helping to expand the existing clientele. Previous studies have shown a direct relationship between business image and success (e.g. Abu Bakar, 2007; Olins, 1991; van Riel and Balmer, 1997). These studies also claimed that image is a resource that clearly distinguishes a business entity from another as well as providing better competitive advantage. A reputable business image has also been associated by past studies with increased confidence of customers in the products and services offered (Zeithaml, 1988); the attraction and subsequent retention of adept employees (Caminiti, 1992; Dowling, 1986; Preece, Fleisher, and Toccarcelli, 1995); reduction in the cost of operations (Kotha, Rajgopal, and Rindova, 2001); the ease in obtaining financial aid (Beatty and Ritter, 1986); and the reduction in the cost of purchases (Kotha et al.)

Brand or product reputation can also enhance the image of the businesses utilizing it, thus bolstering their chances for success. In this case, Respondent 6 elaborated, “For retail skincare…we do use a lot the product Dermalogica. That’s the reason why we lay them out at the main [entrance] area. In addition, other renowned products are also being offered.” Similarly, a business that has an established name or locality is bound to do well. In this study, Respondent 4 associated the popularity of his company’s name with success. “Before, we did not have large clients. We had mostly private limited companies that engaged us to make name cards and brochures. But today we print books, manuals and the like. This says that our reputation has spread.” (Personal communication, 4th September, 2008). A business that has long been established in a particular locale would have the upper hand against competitors who have just set up in that place. “The kindergarten has been long established. [Already] 12 years…” (Respondent 2, personal communication, 27th August, 2008).
The act of continuously promoting one’s business will eventually bear fruit in a heightened image of the business in the eyes of customers. “We still must be doing marketing, I don’t think we want the same service all the time, right?” (Respondent 7, personal communication, 16th September, 2008). Varied use of different types of media has also been found to be effective in promoting the activities of the business. In this respect, Respondent 7 said, “We used the magazine a lot…to promote.” (Personal communication, 16th September, 2008). Through sheer effective promotion an entrepreneur can attract customers to his or her premise despite being located in a less than ideal location. Nothing is more important to a business’ success than a proven track record in meeting the expectations of customers and business partners. In line with this, Respondent 4 endeavored to make good all his obligations towards his Financiers. “Because they are happy with us…as for example, when we give a check, the check will never once bounce… [And] when we commit to a week’s time and they come, the check would be ready.” (Personal communication, 4th September, 2008). A study by Zeithaml (1988) showed that business image can instill customer trust in the products and services and influence customer decision to buy. In addition, it has the effect of influencing customer retention, encouraging repeat buys and allowing the business to place a high price on its products (Chaminiti, 1992; Preece et al., 1995).

**Location**

Location plays a prominent role in determining whether a business flourishes or fails. According to Respondent 3, a tuition centre operator, being located in a housing estate and in close proximity to places of public interest gives the centre an added advantage in attracting more clients. “Being just in front of the market, it’s easy for people to see. Moreover, there is no other tuition centre. The one nearest is over there…and quite a distance from here.” (Personal communication, 2nd September, 2008). To Respondent 4, a strategic location provides all interested parties the ease of dealing with him. “We can’t locate the shop far away…customer[s] would have a problem coming to the shop.” (Personal communication, 4th September, 2008). Locating the business close
to the market, as was done by Respondent 3, is a strategy that pays handsome dividends. In her case, Respondent 3 chose to be near her targeted clients - primary school students. “There are five primary schools around here…they can come here for tuition.” She further added, “[The residents] here are packed…down here [the residents] are packed. The housing estate near the flats has many people.” (Personal communication, 2nd September, 2008).

**Diversification Activities**

Product or service diversification is a growth strategy aimed at creating a new customer base, which by definition expands the market potential of the original product or service; or creates a new market for a new product or service. As far as the GEF entrepreneurs are concerned, three strategies were evidently employed: that which requires market diversification of existing product or service; that which involves diversification into other product or service, and forward integration. The growth of institutions of higher learning at Chendering, Terengganu, had prompted Respondent 4 to open up a new branch in that locality. “At that location, we concentrate on the new universities like UiTM and KUSZA” (Personal communication, 4th September 2008).

Diversification to different products refers to the actions taken by entrepreneurs to offer a variety of different products as a way of exploiting all opportunities available in a given field. This action too contributed to the success of the graduate entrepreneurs. According to Respondent 4, “We established one more company called Agro and Medical. That’s because we have a lot of projects in the agro field. Medical, for example, medical lab. Here too, we have a number of scientific projects being offered to us.” (Personal communication, 4th September, 2008). The merits of diversification are well recognized by the respondents. For Respondent 1, diversification is a sure means of improving on her success, although at this point it is something that her business is not ready for. “We don’t want to concentrate on services [only], we now want to supply…[do] trading. That’s our current intention…” (Personal communication, 26th August, 2008).
Forward integration refers to a business strategy of conducting the distribution of the product by the business entity itself as opposed to middle men as was done previously. Respondent 5 said, “My father has five buses…so I have acquired one myself. Actually we have plans to get one more this year…” (Personal communication, 12th September, 2008). The respondent further associated forward integration with success of his travel agency, “The bus has many benefits…The bus provides free advertisement. With our company logo on the bus, many people can see…sometimes even government authorities contact us.” (Personal communication, 12th September, 2008). Forward integration strategy was also employed by Respondent 8.

Worker Dedication

As confirmed by Respondents 7 and 4, the type of employees that they have can exert a big influence on the performance of their businesses. “Of course! Staff too, is very important,” said Respondent 7. (Personal communication, 16th September, 2008). “Now, thank God, our staff has so far chosen to remain with us. We have been taking in people one at a time since 2004.” (Respondent 4, personal communication, 4th September, 2008). This contention is proven by the fact that the employees of Respondent 4 are willing to put the interest of the business above their own. In the words of Respondent 4, “If they are asked to do overtime, they will do. That’s where we want to create commitment.” (Personal communication, 4th September, 2008). The entrepreneurs also linked the way they handle employee welfare to enhanced productivity and loyalty on the part of the employees. “From the day we were established till today, we have only once delayed the payment of salary for two days. And that is only because I was outstation…The rest were on time.” (Respondent 4, personal communication, 4th September 2008). The same sentiment was voiced by Respondent 6. “Hands on commission is a normal practice, we do give. If they sell products, we will give [the commissions].” (Personal communication, 15th September, 2008). Ultimately, according to Respondent 6, “They are very happy. When we offer incentive like that, they like it.” (Personal communication, 15th September, 2008).
To cultivate employee commitment to the business, it is necessary for the entrepreneur to encourage the personal growth of the employees themselves. By so doing, the employees will sense that they have a better future ahead and will strive to give their best to achieve it. Directly or indirectly, this will positively impact the entrepreneurs’ businesses. One avenue of growth for the employees would be their promotion to the status of a partner in the business. “I have educated them from the very beginning; I will make them share partners. So, they will see that in the end they too can own a spa. So, in this way they become more committed.” (Respondent 6, personal communication, 15th September, 2008). As a testimony of this truth, a former employee of the respondent has now managed to open a business of her own.

**Constraints**

Earlier studies have identified many factors that obstruct the progress of SMEs (e.g. Abu Bakar, 2007; Mohd. Osman, 2002). In this study, the entrepreneurs identified four constraints that prevent them from achieving even greater success: capital, technology, employee and space. According to Respondent 1, “When we want to extend the business [or] do enhancement [or] need some more capital. That’s the part that we are most unhappy.” (Personal communication, 26th August, 2008). In concert with this, Respondent 4 admitted that insufficient funds have disrupted his business. “The most obvious difficulty is when we are short [of] capital. That’s the most obvious…[especially] when an order comes in.” (Personal communication, 4th September, 2008). Capital constraint was also felt by yet another respondent, who admitted to lost income as a result of insufficient funds. Due to capital constraint, the same respondent intimated how he had to delay servicing his loan to SME Bank. (Respondent 5, personal communication, 12th September, 2005). In the case of Respondent 4, a lack of funds prevents him from securing more lucrative markets and bigger clients. “If we were to expand further, we will need at least a capital of two million [Ringgit]. That would put us in a very secure position [and] we can approach bigger clients like National Printer.” (Personal communication, 4th September, 2008).
For a business that is susceptible to changes in technology, such as the printing business, technological constraint can exert a significant impact on its success. Respondent 4 quoted the lack of cutting edge machinery as a constraint that he had to endure. On this matter, the respondent said, “As far as constraints are concerned, we in the printing business are not up to par yet. There are other machines that we need.” (Personal communication, 4th September, 2008). Employee constraint is yet another factor that prevents the graduate entrepreneurs from achieving even greater success. “As far as employee requirement goes, we do sometimes face a shortage of manpower and this prevents us from expanding. When the orders keep coming in there will be a lot of jobs…printing and they are always urgent!” (Respondent 4, personal communication, 4th September, 2008).

Last but not least, this study found that the success of the graduate entrepreneurs is also hampered by inadequacy of premise space. Due to this constraint, Respondent 4 was not able to outfit his business with the required machinery and tools, thus affecting the business’ productivity. “And if we were to procure all the machinery, the existing space simply cannot accommodate it…the space is plainly not enough.” (Personal communication, 4th September, 2008). The discussion on constraints above suggests that the GEF entrepreneurs would have achieved even greater heights if it has not been for the existence of capital, technological, machine, employee and space constraints.

Analysis

The NVivo7 Qualitative Data Analysis Software was used to aid in the identification, condensation and analysis of the interview data in order to address the research question. The transcribed data from the interviews were divided into eight separate documents according to the number of respondents. Each document was opened separately and coded. Grounded theory uses three level of coding. The first level, involving open coding, is the stage where the transcripts are examined and coded via a process which breaks the interview into discreet threads of datum. The
data is then collated and amassed to form categories of similar phenomena. During the entire process of open coding, the data is examined without any limitations in its scope and without the application of any filters. Thus all data are accepted. As the categories begin to fill, those that are most dense become known as core categories (Glaser, 2001). As core categories become apparent, the researcher moves on to the second level of coding, that of selective coding. During selective coding, the researcher is allowed to filter and code the data which are determined to be more relevant to the emerging concepts. Hence, only the most relevant parts of a transcript are used and coded. To facilitate this process, interview questions are continuously reformulated to include new and more focused direction of the research.

The final stage of coding is known as theoretical coding. Theoretical coding occurs when core categories have become saturated. Saturation is both a peculiarity and strength of grounded theory. Unlike other methods of qualitative analysis which acquire rigor through multiple levels of confirmation or triangulation (Mertens, 1998), grounded theory builds on the analytical case by constantly seeking new categories of evidence. Eventually, after a period of data collection, a point is reached when no new data are forthcoming. This is the point of saturation. According to Selden (2005 p.124), “One keeps on collecting data until one receives only already known statements.” Theoretical coding examines these saturated categories for conceptual relationships between categories and their relevance to literature (Glaser 2001).

After the data has gone through the three stages of coding and when the full list of themes has emerged, the process of integration and screening is undertaken. In this process, any doubtful theme is initially left to stand alone rather than eliminated or integrated. For this study, 43 themes finally emerged after going through the coding and integration steps mentioned above. Eventually, the total list of 43 themes was segregated into 6 Parents, 23 Children and 12 Grandchildren nodes.

The final Tree Nodes are shown in Table 2.

Table 2
**Tree Nodes from Interview Transcripts**

**Tree: Parent (P), Child (C) and Grandchild (G)**

<table>
<thead>
<tr>
<th>P1</th>
<th>Success</th>
<th>C1</th>
<th>Growth in sales</th>
<th>G1</th>
<th>Niche market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C2</td>
<td>Growth in assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3</td>
<td>Growth in the number of employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C4</td>
<td>Profitability</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C5</td>
<td>Survivability</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C6</td>
<td>Satisfaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P2</th>
<th>Customer satisfaction</th>
<th>C1</th>
<th>Recurring customer</th>
<th>G1</th>
<th>Quality control</th>
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<tbody>
<tr>
<td>P3</td>
<td>Product quality</td>
<td>C1</td>
<td>Product differentiation</td>
<td>C2</td>
<td>Niche product</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C2</td>
<td>Niche product</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3</td>
<td>Product enhancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C4</td>
<td>New products</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>P4</th>
<th>Networking</th>
<th>C1</th>
<th>Already in business</th>
<th>G1</th>
<th>Trustworthy</th>
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<tbody>
<tr>
<td>P5</td>
<td>Business Image</td>
<td>C1</td>
<td>Availability of own capital</td>
<td>C2</td>
<td>Reputable product</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C2</td>
<td>Reputable product</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3</td>
<td>Promotion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C4</td>
<td>Good track record</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C5</td>
<td>Reputable business</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| P6   | Constraint            | C1       | Capital            |          |                |
|      |                       | C2       | Technology         |          |                |
|      |                       | C3       | Employees          |          |                |
|      |                       | C4       | Space              |          |                |

<table>
<thead>
<tr>
<th>P7</th>
<th>Location</th>
<th>C1</th>
<th>Strategic location</th>
<th>G1</th>
<th>Market proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td>P8</td>
<td>Diversification</td>
<td>C1</td>
<td>Market diversification</td>
<td>C2</td>
<td>Diversification to other product or service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3</td>
<td>Forward integration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| P9   | Committed employees   | C1       | Employees welfare  |          |                |

Source: Current study

**Conceptual Framework**

As a result of the qualitative study, a new conceptual framework of factors influencing the success of Malaysian graduate entrepreneurs is constructed as shown in Figure 1.
Figure 1. Conceptual framework of factors influencing the success of graduate entrepreneurs in Malaysia.

Summary

This qualitative study serves to explore the factors that contribute to the success of Malaysian graduate entrepreneurs. Using the grounded theory methodologies found in the works of Glaser and Strauss (1967) and Strauss and Corbin (1994), the study found that enterprise factors that contribute to the success of the graduates are customer satisfaction, product quality, networking, business image, strategic location, diversification and committed workforce. Enterprise success is measured by the graduate entrepreneurs in both subjective and objective terms. Technological, capital, employee and space constraints are found to hamper their progress. A conceptual framework encapsulating all plausible explanations of enterprise competitive advantage through its exploitation of internal resources and capabilities was crafted at the end of the study.
REFERENCES


Science marketing within the biotechnology marketing culture

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University of Eastern Finland, Finland
heidi.rajamaki@uef.fi

Several scholars have written about a ‘marketing culture’ of business organizations. Our paper adds a new layer to this literature by looking at culture as a root metaphor. Adopting the culture as root metaphor perspective we analyse how commercial biotechnology marketing is understood from the inside, i.e. from the point of view of biotechnology business people. The analysis opens up two modes of marketing relevant within the biotechnology marketing culture: generic marketing and science marketing. The content and process of these will be discussed further in our paper.

Keywords: marketing culture, science marketing, biotechnology
This workshop will outline how three institutions - Webster University, Columbia College-Chicago and the University of South Carolina - approach entrepreneurship education for arts students. Facilitators will provide an in-depth description of their efforts including: degree plan outlines, curriculum and pedagogy.
Assessing the Business-Enabling Environment for Women’s Entrepreneurship: Lessons Learned

Annette St-Onge, Solutions for Women Business Owners Inc.
Anne Simmons-Benton, Booz Allen Hamilton
Lois Stevenson, Industry Canada
Julie R. Weeks, Womenable, jweeks@womenable.com

Entrepreneurial success is influenced by internal and external factors. An entrepreneur’s past experience and level of knowledge, his/her connections and relationships with others, and the level of financial investment made at start-up all impact business success. In addition, the environment in which firms operate can also either help or hinder business growth and development. Recent assessments of business-enabling environments (BEE) done from a gender perspective have shown that gender-blind environmental assessments can miss key structural and societal barriers that may be limiting the growth of women-owned enterprises. This panel discussion will focus on the exogenous factors influencing business success – laws and regulations, public and private sector support structures, and the social environment – taken from the perspective of women’s enterprise development.

Keywords: business-enabling environment, BEE, assessment, women’s enterprise development, women’s entrepreneurship
The Triple Bottom Line:

Performance Measures in Social Entrepreneurship Research

Michelle D. Lane

Social entrepreneurship research is quickly evolving as a significant area of inquiry for academics. Because economies are weak there is a rise in social entrepreneurial ventures (SEV’s) that arise to fix the societal problems. The measurement of the social impact of these ventures is proving to be difficult as they have to deal with not only staying financially viable, they also need to demonstrate that they are making a difference. This research presents a review of the current academic literature on SEVs and performance measurement. A comprehensive framework for developing measures of SEV performance is then proposed.

Introduction

The rising stature of social entrepreneurship as a means to address social needs in a cost-effective, or even profitable manner has been accompanied by increasing interest in social entrepreneurship as a field of academic study. One great challenge in studying social entrepreneurship ventures (SEV’s) is that it is difficult to measure results. There are the standard measures of performance (e.g. profitability, productivity or cost effectiveness), as well as the measures of social impact, (addressing a social concern, minimizing carbon footprint), which are equally important in the minds of critical constituents.

Like for-profit firms, SEV’s have multiple constituencies to satisfy, but their triple bottom line measurement practices are complicated. First, the SEV’s must address sustainability as they generate human capital and financial capital to sustain operations. Second, they measure the outcomes of their processes in terms of Social Entrepreneurial Activities (SEA’s) in terms of
tracking how much they are doing, growth, scale, and the direct outcomes of their processes. The third area, one that is not addressed in regular business enterprises, is the measurement of social impact. Since SEV’s are founded for the purpose of filling a void in the social and environmental domains that is not met by existing governmental or business processes, determining their ultimate impact on the problem is a crucial and often evasive measurement.

This research will examine the research question:

*Is there consistency in way SEV’s measure performance or is it context specific?*

The purpose of this research is to summarize current literature on social entrepreneurship performance measures. Since this field is relatively new and there were fewer than a dozen articles on social entrepreneurship and performance I will also reference the work from two other sources. Two major university Social Entrepreneurship research centers have provided publications on this topic, Columbia University (RISE) and Duke University (CASE). The result is a framework for understanding performance measures for social entrepreneurs as well as proposal for future research on performance pertaining to the triple bottom line.

**Theoretical Background**

The examination of SEV performance needs to be placed in the domain under which social entrepreneurship is defined. Therefore a brief review of definitions will be presented in order to clarify the one that will be used in this research. The literature addressing the performance measurement of SEV’s will then be reviewed. Theoretically proposed measures and performance measures addressed in empirical studies will be summarized. This will provide the foundation for the framework to be presented in the subsequent section.

**Defining social entrepreneurial ventures**
As in any new field of research, there have been a few significant articles examining the
definition of social entrepreneurship (Thompson et al. 2000; Austin et al. 2006 and Weerawardena and
Mort 2006). The essence of the definition requires the ‘social’ part that is a business dedicated to
remediating a weakness in the social system, impacting people or the planet. Social ventures step up to
meet this need that is not met by the government or businesses. For example, illiteracy in adults is an
ongoing problem where the education system and government falls short. A social enterprise may
emerge that provides literacy education, but it is a traditional teaching model and is there, really to take
the opportunity to make money in filling this social need. In contrast, a Social Entrepreneurial Venture
may emerge that is driven by an individual who is focused on helping those who cannot read, as well as
attempting to fix the system that created the problem in the first place, and does so with unique practices
and initiatives. The focus of this organization is on the mission to solve the illiteracy problem, not make
money off of it, whether it is a non-for-profit or for-profit venture. The social enterprise is focused on
profitability, and will not be interested in endeavors that would eliminate the need for their services, in
other words, not wanting to have a social impact on the problem. This example demonstrates the contrast
between an SEV and a social enterprise. SEV’s are there to meet a social need unmet by current
infrastructure, in a unique or entrepreneurial way.

The previous example brings up the other consideration in defining an SEV: Does being a ‘for-
profit’ organization preclude them from being considered an SEV? There are arguments on both sides
regarding the profitability issue. The RISE report (2006) was a study specifically of for-profit social
ventures. Their findings indicated that 60% of the 190 firms studied where primarily socially oriented or
equally balanced between social and profit generation. The remaining 40% put financial goals first.
Philosophical differences between the two groups were clear. The social emphasis group viewed profit
generation as a necessary requirement to generate the financial resources needed to support their mission.
The financially oriented firms, while being just as focused on firm mission, viewed profit generation and
proliferation of their social value product or service as a means of enhancing social value. As one CEO
stated “We are social when it makes business sense: The generation of profits is our company’s major goal, but we do create social value when it enhances profitability and makes good business sense to do so” (Pg. 9). Social and economic goals are present in an increasing number of business ventures (Shaw and Carter 2007; Zahra et al., 2009) as well as in Corporations under the term ‘Corporate Social Responsibility’ (Matten and Moon 2008). As pointed out by Austin, Stevenson and Wei-Skillern (2006), the need for SEV’s is much greater than the ability of non-for-profits to meet those needs. Therefore the contributions by for-profit firms and corporations in pursuing social entrepreneurial missions are important. This research will use the broader, all encompassing definition presented by Paul Light (2008) as “efforts to solve intractable social problems through pattern-breaking change” (p.12) where non-for-profit and for-profit ventures can both be included. The creation of a general framework for summarizing learning should be more inclusive, rather than exclusive.

**Articles Presenting Theories Including Performance**

Upon reviewing an extensive amount of literature on SEV’s, there is little to report on theoretical propositions addressing measurement of SEV performance. There is considerable coverage that entails defining social entrepreneurship, looking at the business models for developing a successful SEV, classifications of social entrepreneurs and leadership traits of social entrepreneurs (Alvord et al. 2002; Prabhu 1999; Paredo and Mclean 2006; Zahra 2009). The articles summarized in Table 1 are a collection of research that address the theoretical underpinning of the measurement of SEV performance, either directly or indirectly. The prevailing common theme in this literature is the focus on the social impact performance of the SEV. The formation of a social entrepreneurial venture at its founding is a deliberate and unwavering focus the mission to cure a social or environmental ill. As such it is always a deficiency that is a result of some political, governmental or cultural activity (or lack thereof). In the earlier research by Prahbu (1999) and Wallace (1999), both researchers discuss the need for
performance measures that reflect long term changes in socio-political structures and the economic impact to the community. A comprehensive model presented by Austin, Stevenson and Wei-Skillern (2006) captures the essence of SEV’s success, the securing of human and financial capital, and points out the political, economic and government forces can seriously impact venture success.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Focus of paper</th>
<th>SE Domain</th>
<th>Performance Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin et al. 2006</td>
<td>Comparison of Commercial and Social Entrepreneurship. Applying PCDO. The Social Venture Proposition (SVP) combines People, Capital and Opportunity.</td>
<td>Continuum from commercial to social</td>
<td>Performance is impacted by alignment with these forces:</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-Political</td>
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<td>-Macroeconomy</td>
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<td>-Sociocultural</td>
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<td>-Regulatory</td>
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<td>-Tax</td>
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<td></td>
<td></td>
<td></td>
<td>-Demographics</td>
</tr>
<tr>
<td>Murphy and Coombs 2008</td>
<td>Take the concept of Corporate Social Entrepreneurship and apply it to social entrepreneurship contexts.</td>
<td>“creation and undertaking of a venture intended to promote a specific social purpose or cause in a context of mobilization” p. 326.</td>
<td>Environmental Economic Social drive the need for venture value creation.</td>
</tr>
<tr>
<td>Prabhu 1999</td>
<td>Ties research on social entrepreneurship leadership to entrepreneurship research.</td>
<td>“innovative entrepreneurial organizations ..whose primary mission is social change”. P 140.</td>
<td>Cultural and social impact:</td>
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<td></td>
<td></td>
<td></td>
<td>-economic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-political</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-technical.</td>
</tr>
<tr>
<td>Wallace 1999</td>
<td>This article, while older, addresses the issue of the social and political forces that impact SEV’s (referred to as Social Purpose Enterprises).</td>
<td>For-profit enterprises mainly in urban communities.</td>
<td>Socio-political impacts Government affiliations.</td>
</tr>
</tbody>
</table>
Empirical SEV Research That Includes Performance

The empirical research that addresses performance measurement of SEV’s is also reflective of the early stages of this field in the research arena. Out of a dozen studies, seven were case studies from examining from one to six case examples, four were interviews where three of those were large scale studies sponsored by SEV centers and funds (CASE 2008; Clark and Ucak 2006; Light 2008) and one was a survey of churches (Pearse II et al. 2009). A summary of this research is shown in Table 2. The scope of the SEV domain includes a majority of studies that include both for-profit and non-for-profits, with only 3 studying strictly non-profits. The RISE study (Clark and Ucak 2006) is the only study specifically focusing on for-profit firms with a social mission, either explicitly or implicitly declared.

Table 2
Summary of Empirical Research

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Focus of paper</th>
<th>SE Domain</th>
<th>Performance Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alvord et al. 2002</td>
<td>Review of 6 cases for innovation and scope, process change and learning</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>Reach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transformation:</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-Economic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Political</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Cultural</td>
</tr>
<tr>
<td>Bloom and Chatterji 2009</td>
<td>Addresses scaling by SEV’s. Presents the SCALERS model: Staffing, Communicating, Alliance building, Lobbying, Earnings-generation, Replicating, and Stimulating market forces. 6 cases.</td>
<td>“New organizations or programs that are dedicated to mitigating or eliminating a social problem, deploying change strategies that differ from those that have been used to address the problem in the past.” (p.114)</td>
<td>Measure actions including growth of those served, decline in problems</td>
</tr>
<tr>
<td>CASE 2008</td>
<td>Interviews with 85 knowledgeable informants including academics, consultants, funders, practitioners &amp; authors</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>-Process measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Outcome measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Long term Impact</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-Systemic change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Incremental social impact</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Study/Methodology</td>
<td>Sample/Scope</td>
<td>Methodology/Assessment</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Clark and Ucak 2006</td>
<td>RISE for profit SEV survey of 211 companies younger than 30 years old, U.S. based</td>
<td>For-Profit</td>
<td>-Stories and testimonials -Comparative measures -Benefit/Cost Analysis -Surveys -Third Part Assessments -Empirical Studies -Social Return on Investment -Social Audit -Other</td>
</tr>
<tr>
<td>Kramer 2005</td>
<td>Evaluation of applications for SEV grants-Common practices with 26 interviewees</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>Progress against goals Growth Capacity Balanced scorecard Leverage Social return on investment</td>
</tr>
<tr>
<td>Light 2008</td>
<td>Study of 131 to 250 High Performing SEV’s over a period from 2001 to 2006. Examining the practices of High, Medium and Low SEV’s</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>Ability to Achieve Mission Growth in Program Demand Growth in Financial Pressure Budget Growth</td>
</tr>
<tr>
<td>Nichols 2009</td>
<td>‘Blended Value Accounting’ measures of social and environmental impacts using 5 case studies.</td>
<td>Both For-Profit and Non-For-Profit in the UK</td>
<td>Social return on investment Enhanced Social Audit-progress toward mission Trustees report of progress toward goals.</td>
</tr>
<tr>
<td>Pearce II et al. 2009</td>
<td>Entrepreneurial Orientation and impact on performance for 250 religious congregations.</td>
<td>Non-For-Profit</td>
<td>Growth in membership Financial Contributions</td>
</tr>
<tr>
<td>Rhodes and Donnelly-Cox 2008</td>
<td>Single case and study of complexity theory</td>
<td>Non-For-Profit</td>
<td>Legitimization Impact Funding</td>
</tr>
<tr>
<td>Sud et al. 2009</td>
<td>Two cases in examination of legitimacy and isomorphism</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>Gains toward mission Long term benefits Social benefits</td>
</tr>
<tr>
<td>Vega and Kidwell 2007</td>
<td>Comparing 80 cases of new ventures in social and traditional entrepreneurs</td>
<td>Both For-Profit and Non-For-Profit</td>
<td>ROI Social ROI</td>
</tr>
<tr>
<td>Weerawardena and Mort 2006</td>
<td>Study of 9 cases in Australia and literature review to develop a</td>
<td>Non-For-Profit</td>
<td>Adherence to Social Mission Sustainability of the</td>
</tr>
</tbody>
</table>
There are three major SEV studies included in this list, CASE, RISE and Paul Light’s research. The SEV research by Paul Light from New York University from 2001 through 2006, supported by the Ewing Marion Kauffman Foundation and the Jeffrey Skoll Foundation, is shown. The focus of his data collected on for his 2008 book was on the activities of SEVs that were classified as highly, moderately and not too socially oriented firms. He examined founder characteristics and involvement, level of risk, and organization management. Although the focus of his research was not on performance, he did collect information on firm budget growth and program demand. The findings showed that the highly socially entrepreneurial firms had much higher growth in demand and budget than the other two categories. It was also discovered that sources for interventions in improving performance including foundations, providers of technical assistance and to a lesser extent government were important.

**Summary of the CASE Research on SEV Performance**

The Center for Advancement of Social Entrepreneurship (CASE) sponsored by the Duke University Fuqua School of Business with funding from the Skoll Foundation published a report on “The Developing Field of Social Entrepreneurship” in 2008. This report summarizes a two year study to explore social entrepreneurship, including defining the field, exploring techniques used by social entrepreneurs, financial markets, human capital needs, and defining effective business models. Experts including practitioners, academics, funders, authors and consultants were used in this study. The focus was not on performance measures, with the exception of recognizing the need for effective measures that may vary with context. The comment was made in the report “If you add up all of the social entrepreneurs
and have no idea of impact—what have they done—the field cannot advance. You really need numbers to support the idea of impact” p. 17. The framework for the report provides the capital infrastructure needed for an SEV including financial, human, intellectual and social/political capital. They also note that the context setting factors such as politics, media, economic conditions can impact outcomes. Both of these categorizations shed some light on impact measures to be considered.

**Summary of the RISE Research on SEV Performance**

RISE is the Research Initiative on Social Entrepreneurship project being supported by the Columbia Business School. The following information is taken from the RISE For-Profit Social Entrepreneur Report (Clark and Ucak 2006) that summarized the findings from CEO’s of 211 for-profit SEV’s. These COE’s were classified according to their viewpoints on explicitness of their Social Value creation plans to their stakeholders, and their emphasis on financial orientation versus a more balanced or socially oriented focus. Four CEO classifications were proposed:

1. Activists (A) – Explicit with customers and socially oriented
2. Change Agents (CA) – Not always explicit with customers and socially oriented
3. Market Pioneers (MP) – Always explicit with customers but financially oriented

These classifications showed differences in the practice of evaluating the social impact. For instance Market Pioneers more frequently evaluate social impact than Change Agents, perhaps to justify claims they made to financial stakeholders. The industry context did reveal some differences in the type of social impact methods that are preferred and the percentage of firms in the industry that measured impact. Refer to Table 3. Overall, 59% of these respondents reported using measures of social impact performance. Consumer products and retail is the only industry group that far exceeds the average use at 83%. Agricultural, health and Food uses social impact
performance measures the least at only 39%. So it does appear that some contexts are more conducive measurement. The types of measurement also varied significantly. Stories and testimonials of success were the most common across all segments with 76% reporting their use. Comparative measures, cost/benefit analysis and surveys were the next most common methods across all groups, falling in the 41 to 54% range. Unfortunately this information does not spell out specifically what is being measured. The reasons for measurement seem to vary as well as often firms mentioned using the information to help them promote themselves and sell product or services, rather than to show what kind of long term impact they were making for the sake of the cause alone. The research does show that there is a lot of experimentation with different more rigorous evaluation tools, some provided by external consultants and academics. The desire is to find that simple method that can reflect their impact.

Table 3

<table>
<thead>
<tr>
<th>Industry type</th>
<th>Percent of firms that measure performance</th>
<th>Most common type of performance</th>
<th>Percent of SG&amp;A spent on measuring performance</th>
<th>Most common type of social entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/Health/Food</td>
<td>39%</td>
<td>Anecdotes &amp; studies, used to set an example</td>
<td>&lt; 2%</td>
<td>A, MP</td>
</tr>
<tr>
<td>Consumer products/Retail</td>
<td>83%</td>
<td>Anecdotes</td>
<td>&lt; 2%</td>
<td>A, MP</td>
</tr>
<tr>
<td>Energy/Environmental Technology &amp; Utilities</td>
<td>61%</td>
<td>Most rigorous</td>
<td>Not provided</td>
<td>A</td>
</tr>
<tr>
<td>Financial/Consulting/Services</td>
<td>Not provided</td>
<td>Used to sell product/service</td>
<td>Not provided</td>
<td>A</td>
</tr>
<tr>
<td>Manufacturing/Construction/Transportation</td>
<td>60%</td>
<td>To sell product/service</td>
<td>&lt; 2%</td>
<td>A</td>
</tr>
<tr>
<td>Media/Education/Communications</td>
<td>54%</td>
<td>Stories/anecdotes, used to sell</td>
<td>&lt; 10%</td>
<td>A</td>
</tr>
<tr>
<td>Software and IT</td>
<td>58%</td>
<td>Stories, surveys, used to sell</td>
<td>&lt; 2%</td>
<td>A, MP</td>
</tr>
</tbody>
</table>
RISE has also developed a social venture rubric that assesses five financial factors and five social factors as part of their ‘double bottom line’ taken from the Double Bottom Line Project Report. These performance measured are summarized in Table 4. This instrument, while not designed to be an evaluative tool for the long term impact a firm has over time, is designed to help social entrepreneurs sort out the complex tasks of financing a venture and determining if it is staying on target with its mission. Some of these areas are important to impact measure creation and are useful in the framework developed subsequently.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>RISE Social Venture Rubric Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Financial</strong></td>
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<td></td>
<td>Market Potential and Rate of Return</td>
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<td>Product/Services defined</td>
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<td></td>
<td>Competitive Insulation</td>
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<td></td>
<td>Annuity and Cash Flow</td>
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<tr>
<td></td>
<td>People skills and needs</td>
</tr>
</tbody>
</table>

There are several common themes that are present in the empirical research on SEV’s. Firm sustainability and process measures have many common factors. Growth, budgets, donations, funding are all indicators of firm survival. Process measures are also always an important indicator of the activities that firms undertake including clients served, educations provided, endeavors undertaken etc. The social impact measures seem to fall into three major categories: government and political impact, economic impact, and socio-cultural impact. If a SEV is successful in changing the way things are done in these areas, they are making an impact that dramatically changes the environment. Success would indicate that the SEV has worked itself out of business.
Framework for Measuring Performance

As shown by the review of the literature, performance measurement for social entrepreneurs is fraught with complexity. The measurements need to address survival, process outputs and ultimately reaching the social mission. Achievement of the social mission, however, depends on making a significant changes, often times to multiple constituencies including government, cultural attitudes, as well and the processes that are currently in place. In observation of the research presented, and in answer to the research question posed: “Is there consistency in way SEV’s measure performance or is it context specific?” Yes, there is consistency across context in measuring SEV performance. As such, I am proposing a two dimensional framework representing three levels of performance measurement over three dimensions of change.

Three Levels of Performance Measurement

Traditional businesses seeking profitability goals use the traditional Input-Process – Output model, where the measurements focus on process outcomes measurement, such as number of customers served, sales increases, growth, etc. plus profitability including all of the traditional measures including Return on Investment, Asset Turnover, Net profit, Earnings, etc. Process outputs lead to net profits (or losses). A SEV also has inputs leading to process outputs but the profitability measurement may or may not be there. But the ultimate goal is the social impact the firm makes, in achievement of its mission. Without profitability, how does the firm
know if they are achieving their mission. Sustainability alone may not mean they are accomplishing the social impact effectively, or at all. These measurement are therefore more of a recursive relationship as show in Figure 1.

**Figure 1**

SEV Performance Relationships

The common theme in the research points to measurement in these three categories. First, performance can be measured by *firm sustainability*. Are they making enough money to sustain their venture? Some operational measures typically used for regular business ventures, such as cash flow and operating income are appropriate, while profitability and return on investment may not be (depending on if they are a for-profit or non-for-profit organization). Second, they may measure their *social actions* that have a direct impact on their constituencies. This is a measurement of process outcomes. For example, the number of children tutored, the number of homeless served or the amount of media coverage might be measures of the outcomes of the processes used in the SEV. These direct measures deal with the day-to-day actions that take place. The third, and most difficult level of measurement, is the *social impact* they provide. Social entrepreneurs attempt to use creative means to meet the needs of social problems that regular means do not address. Ultimately the social impact is the key ‘triple bottom line’
measurement that is needed, but yet is the most elusive. As pointed out by Austin, Stevenson and Wei-Skillern (2006), measurement challenges are complex due to “nonquantifiability, multicausality, temporal dimensions and perceptual differences in the social value created” (page 3). These three areas that are used to assess performance; firm sustainability, social action and social impact, will be discussed in the following rhetoric. As a point of clarification, the ‘Triple Bottom Line’ designation used herein is different from the triple bottom line referred to in corporate social responsibility literature where the three ‘P’s refer to measuring corporate response in terms of Profitability, People and Planet (Cokins 2009; Stephenson et al. 2008). Since the social entrepreneurship literature makes reference to double and triple bottom line measures, this designation was used here.

Firm Sustainability, as far as a SEV is concerned, is about paying the bills. SE ventures are usually in a position where closing up shop when finances are scarce is not an option, unlike other entrepreneurial firms. Therefore, social entrepreneurs exhibit an insatiable optimism about their firm success, even when things are dire (Light 2008). Acquiring both human and financial resources are key components to firm survival. The literature shows creative means of financing and continually changing stakeholders as they seek new funding options. New sources of grants, retail operations, fees and new donors are all methods used. Their organizations are often flat, with a lot of autonomy so that organization members can act independently and pursue options as they occur.

Social Action measures address what are the direct, trackable process outcomes that the venture accomplishes. These are operation measures that include number of clients served, programs offered, illnesses treated, number of outreach actions and growth. These measures parallel general operating outcomes of any organization and in those organizations they represent
the success in achieving their goals. Unfortunately, for social entrepreneurs, these measures, while indicating their direct impact on the environment, are often misleading as to whether there is a sustainable ‘social impact’. For instance, a social entrepreneur may have developed a way to secure low income housing for the homeless. The local people benefit from this, and soon, there are an increasing number of people who need the housing in the area. This is due to the fact that word gets out that housing is available, so more people enter the region in hopes of getting housing. Therefore the direct impact measurement shows growth in finding homes but the percentage placed out of the total in need decreases. This leads to the third level of measurement, social impact.

*Social impact* is the measurement of outcomes in terms of changes to the social compared to how things would have been had nothing been done (Clark et al. 2003). Herein lies the complexity in measuring social impact. Perhaps social impact may be better measured by direct impact and achievement of goals. But the constituencies that support the cause want to know if they are making a difference. Is there social impact? Therefore, this research is important in sorting out the triple bottom line issues, in particular with respect to social impact. It research is highly relevant to those in policy-making positions who need to know if their funds achieve social impact. Researchers need an organized foundation in order to build their research, and practitioners want to know if they are making a difference.

**Three Dimensions of Social Change**

Unfortunately, the identification of these three levels of performance do not provide any detail on what to measure. The studies often refer to social return on investment but what will yield a lasting social impact? Since social entrepreneurs are agents of change, it seems appropriate to refer to a field of change research that is already well established, the field of
organizational change. Changing a business will not be exactly the same and changing an entire societal environment, but the influence factors and levers for change will be the same. In Kanter, Stein and Jick’s popular book *The Challenge of Organizational Change* (1992), there are three kinds of movement needed in order for organizational change to occur: Motion of the organization or industry at a macro level with respect to its environment, micro-evolutionary change within the organizational processes and change to the political dimensions. These three kinds of motions are similar to Noel Tichy’s three dimensions of organizational change that include Political, Cultural (macro-level) and Technical (micro-level) (Tichy 1983). He refers to a strategic ‘rope’ in which all three areas need to be addressed for the rope to be complete and the change to be effective and permanent. The technical problem entails the fact that the organization, or society needs to rearrange the way things are done in order for change to occur. For instance, if the illiteracy problem for school age children is to be eliminated, the means of teaching them to read needs to change, not just increasing reading time, but the methods used need to differ. The political dimension is also very important and was mentioned in several of the SEV studies (Alvord 2002; Austin et al. 2006; Weerwardena and Mort 2006). For instance, if political structures are protected by the long-standing government officials who put the current systems in place, they will be resistant to adopting a new approach. The cultural dimension points to the long standing values, beliefs and viewpoints that society has adopted over time. In a culture where homelessness is an accepted part of life, it will be difficult to create programs to remove homelessness as no one will want to dedicate their time or money for a problem they do not recognize. These three dimensions for change provide the foundation for creating a holistic set of measurements of SEV performance. Development of measures to track sustainability, social action and social impact across the technical, cultural and political dimensions would
apply across contexts. The scale of the SEV would place more or less emphasis on differing dimensions depending on if their impact is at a local, national or international level. Figure 2 provides examples of the relationships within this two dimensional framework, taken from the research presented above. The illiteracy problem was used for this example.

**Figure 2**

**Framework for SEV Performance Measurement**

- **Technical**
  - Sustainability-Growth, Income
  - Action-Process to improve literacy
  - Impact-ILLiteracy rates drop

- **Political**
  - Sustainability-funding for lobbyists
  - Action-Apperances before Committees
  - Impact-Laws changed to create new opportunities

- **Cultural**
  - Sustainability-Advertising funding to educate the public
  - Action-Forums, school activities, projects
  - Impact-New organizations created as a voice for the cause.

**Conclusions**

This research provides a starting point for organizing SEV performance measurement. The current research on SEV performance has been thoroughly studied and summarized. A comprehensive model for developing SEV performance measures has been proposed. Whether a firm uses anecdotal evidence, break even analysis or social return on investment, the framework is appropriate. In order for social entrepreneurs to develop programs to cure intractable social problems, they must measure their performance in all three categories. They cannot be
successful if they aren’t financially viable. They cannot be effective if they do not measure impact. Impact needs to be assessed in terms of process change (Technical dimension). But the cultural change and political motivations must also be addressed (Cultural and Political dimensions).

**Future Research Directions**

At this point the framework needs to be applied to several different social entrepreneurial ventures. Case studies can be used to fit the performance measures into the model. The comprehensiveness of the measures relative to the success of the venture will help validate the model. This framework provides social entrepreneurs with a means of developing comprehensive measures. It also provides researchers a foundation on which to build theory. It is also useful to educators as they help their students understand the complexities of measuring social venture outcomes. The weakness of the model is the need for case applications to validate the structure and dimension. This is a recommended next step for research in this area.
References


ABSTRACT

This article fills a need in the entrepreneurship literature by investigating the finances of entrepreneurship centers throughout the world. Three hundred entrepreneurship center directors were surveyed about the various facets of their center’s finances including budgets, fund-raising, contracts, salaries, and seminars/workshops. We received 174 responses for a 59% response rate. The findings go into depth on the specific areas in which centers raise funds for the programs. The results of this research project may be invaluable to entrepreneurship center directors to increase funding for the centers. The study can also serve as a benchmark for financing and fund-raising activities for centers throughout the world.

INTRODUCTION: THE RESURGENCE OF ENTREPRENEURSHIP

The nature of business has been transformed in this fast-paced, highly threatening, and increasingly global environment. With the U.S. suffering from its worst economic downturn since the Great Depression of the 1930’s, companies are realizing that sustainable competitive advantage is fleeting. And yet, in the midst of this economic turmoil, successful companies have made the fundamental discovery that the ability to continually innovate (to engage in an ongoing process of entrepreneurial actions) has become the newest source of competitive advantage (Morris, Kuratko, & Covin, 2008; Kuratko, 2010).

For entrepreneurship educators the revolution has become a reality in universities. Centers of Entrepreneurship are being sought out as the solution to enabling the students to gain greater understanding of entrepreneurship. In addition many centers suffer from
the high expectations of administrators who envision the center having numerous constituencies while providing little or no resource support. This is the state that university-based centers have to deal with all over the world. Faculty and center directors are simply expected to accomplish more with fewer resources. In an atmosphere like this it is imperative that center directors know how to utilize their resources most effectively.

In one of the most comprehensive studies of entrepreneurship centers, Finkle, Kuratko, and Goldsby (2006) stated, “One way that universities can enhance their budgets is through the development of a new entrepreneurship center or expansion of their existing entrepreneurship center. Entrepreneurship centers can be an excellent source of revenue for a university through donations, endowments, external programming, grants, academic programming, and commercialization of technology (pp. 184-185). In this time of reduced budgets and distressed economic times would this idea still hold true? If so what is the makeup of the financial structure of entrepreneurship centers?

With this in mind we undertook a study of entrepreneurship centers throughout the world. The study examines U.S. and international entrepreneurship centers focusing primarily on financial activities. The critical research purpose for the study is to examine what specific financial factors have impacted entrepreneurship centers and to what extent those factors are deemed most important by directors.

**IMPORTANCE OF ENTREPRENEURSHIP CENTERS**

The popularity of entrepreneurship education has been related to the potential for enhancing economic growth through equipping students for venturing or corporate entrepreneurial activities, either on graduation or at a subsequent time in their career (e.g.
Upton, Sexton and Moore, 1995; McMullan and Gillin, 1998; Kolvereid & Moen, 1997; Charney and Lidecap, 2000; Menzies 2004, 2009; Menzies & Paradi, 2002; Kuratko, 2010). University-based entrepreneurship centers have become an important vehicle by which universities provide a range of programs and services that advance entrepreneurship and economic development. Much of the growth of entrepreneurship education and research at universities can be related to the existence of a university-based Entrepreneurship Center (Menzies & Paradi, 2002; Finkle, et. al., 2006).

The foundation of many Entrepreneurship Centers is the offering of entrepreneurship ‘for credit’ and non-credit courses, programs and training in entrepreneurship for students on campus and often for the wider community. Indeed, Mason (2000) in a study of six, mostly Scottish, universities concluded that entrepreneurship courses were best taught if they were associated with a ‘center’ that had a group of professors, support services, and input from local entrepreneurs. The second major activity of many Entrepreneurship Centers located at a university is research. Sandberg and Gatewood (1991) found that most of the centers in their survey were actively engaged in research. Menzies (2009) attributes the existence of the Entrepreneurship Center, to one or more of the following, in relation to university entrepreneurship education and research, for example: initiation, nurturing, operations, championing, marketing, financing. Furthermore an Entrepreneurship Center is often engaged in a variety of additional entrepreneurship-related activities across the university and in the wider community.

Katz (1991), from the US perspective, sees universities and communities being linked by an ‘intermediary’, an entrepreneurship center that will ‘organize, facilitate,
support and direct faculty involvement with small and emerging businesses’ (p.92). The US has an extensive national network of universities (regional catalysts) that have created entrepreneurship centers and embraced entrepreneurship development within their mandate. However, Thierstein and Wilhelm (2001) note in the Swiss context, that there is ‘very little awareness and very little knowledge of these centers’ (p.317), which are aimed at various forms of economic development.

Awareness-raising and assistance at the pre-conceptual and conceptual stage of new venture creation are important ways to promote economic development. These are programs and activities which can be offered by a university Entrepreneurship Center, either for students, faculty and staff, or for people in the wider community. Networking has been shown as a key factor in entrepreneurial success (Donckels & Lambrecht, 1997; Huggins, 2000; Evans & Volery, 2001; Vanhaverbeke, 2001; Adler & Kwon, 2002; Blundel, 2002) and an Entrepreneurship Center can be a primary facilitator of this for a range of constituents. Mentoring programs, often associated with networking, can be a feature of some Entrepreneurship Centers and empirically it has been shown to be a factor in business success (Ragins, Cotton & Miller, 2000).

Activities provided by an Entrepreneurship Center are valuable for nascent entrepreneurs as well as established entrepreneurs (Chrisman & Carsrud, 1991). For example, university-based training and consulting for family business owners is a common and valued part of a center’s entrepreneurship development efforts (Kaplan, George and Rimler, 2000). Incubators, hatcheries, award programs, business plan competitions, training, consulting, facilitating access to funding and assisting with
business plan preparation are just a few examples of how a university-based entrepreneurship center can play a central role in economic development.

Notwithstanding the importance of a university-based Entrepreneurship Center, there are few studies that have taken a strategic focus on the financial structure and challenges associated with carrying out their mission. Given the large number of universities worldwide that are involved in entrepreneurship development, it is surprising that we only have a piecemeal view of what form entrepreneurship centers take and the financial activities in which they engage. It is timely that we learn more about these centers, given the large number that exist and new ones that are continuously being launched.

**STUDIES ON ENTREPRENEURSHIP CENTERS**

There have been numerous studies throughout the years that have focused on various aspects of entrepreneurship education including articles by Solomon, Duffy, and Tarabishy (2002), Brush, Duhaime, Gartner, Stewart, Katz, Hitt, Alvarez, Meyer, and Venkataraman (2003), Katz (2003; 2004), and Menzies and Tatroff (2006). Only a few studies have focused specifically on aspects relating to entrepreneurship centers.

An early study of US entrepreneurship centers, conducted by Sandberg and Gatewood (1991), looked at the focus of the center, the activities they were engaged in and the resources they had accumulated. Their study examined research orientation, budgets size, and constituents for entrepreneurship centers. They found that entrepreneurship centers are diverse and eclectic, however, it is generally accepted that entrepreneurship centers focus on one or more of the following: student teaching, applied
and academic research, training and assistance regarding venturing to on campus constituents and outreach to their local community.

A more comprehensive study of entrepreneurship centers was conducted by Upton (1997) where she performed an in-depth case analysis on entrepreneurship centers. She developed a best practices list for starting, directing, funding, managing, and marketing a center; however, she analyzed only nine centers.

Menzies (2002) studied the strategies and best practices of 19 Canadian entrepreneurship centers and attempted to move from a descriptive approach to a more analytical examination of entrepreneurship centers. Unfortunately, the study does not adopt a theoretical basis but presents a categorization based on the various activities of the 19 centers. For example, centers that focused on nurturing entrepreneurship on campus, or in the outside community (mostly Small Business Development Centers), or on a combination of both missions. In addition, she included case studies of various Canadian entrepreneurship centers, written by the director of each center. The categorization does advance us in terms of recognizing the variations in activities that lead to the various “types” of entrepreneurship center according to their activities. A 2009 study of 26 Canadian Centers by Menzies (2009) replicates the 2002 study but has the similar shortcoming of using only one case study.

Finkle, et. al., (2006) provided the most comprehensive study to date with 146 entrepreneurship centers located in the US and reported results on 94. They surveyed center directors and categorized centers into “nationally ranked” and “unranked centers”. To be nationally ranked it had to have been identified as such in the national media. To be included in the study of entrepreneurship centers by Finkle et al., (2006) it was
necessary that there exist four attributes, as follows: (1) recognition as a center, (2) entrepreneurship curriculum, (3) outreach activities, and (4) entrepreneurship research conducted by faculty, as follows: “a Center for Entrepreneurship (which may use titles such as Free Enterprise, Family Business, or Innovation Center), academic curriculum in entrepreneurship (having three or more for-credit courses aimed at an undergraduate or a graduate degree), external outreach activities, and faculty that perform research in the field of entrepreneurship” (Finkle et al., 2006, p. 186). The results of the study are largely descriptive in nature, however, the study is rigorous, interesting and provides a useful historical benchmarking tool regarding the emergence of these very important organizational units that nurture entrepreneurship on university campuses. Findings include information on the following: characteristics of entrepreneurship centers, number of faculty, including endowed chairs and staff, the type and number of undergraduate and graduate course offerings, including the numbers of students taking the classes, the problems encountered in running the center, detailed information on the directors’ background and demographics, the range of internal and external entrepreneurship development programming, and how the various stakeholders view and measure the overall success of the entrepreneurship center. A noticeable weakness in the study was the lack of information regarding the financial activities of the centers. Other than very general budget figures (many centers had not reported all of their budget figures in this area), there was little information reported in this area.

Other than these few studies there is little knowledge to be gained from the literature regarding entrepreneurship centers. Given the lack of research in this area and the importance of entrepreneurship centers play to a university, we surveyed the entire
sample of entrepreneurship centers in the world. To date this is the largest sample of centers ever examined in the literature.

**THE CURRENT STUDY**

*Methodology*

A list of the centers was formulated through an in-depth search of schools through the Internet, a list of the centers from the Global Consortium of Entrepreneurship Centers, and the Babson College research lists. The sample consists of all entrepreneurship centers (300) located all over the world. We received responses from 174 program directors for a response rate of 58%.

The survey in this study consisted of 50 items and took respondents, on average, about 30 minutes to complete. The survey was developed through the authors and was pre-tested with seven entrepreneurship center directors. Appropriate changes were made based on the comments from the pre-test group.

For this study, we define an entrepreneurship program as having a Center for Entrepreneurship (which may include a Free Enterprise or Family Business Center), if it has academic curriculum in entrepreneurship (having three or more for-credit courses aimed at an undergraduate degree or graduate degree), external outreach activities, and faculty that perform research in the field of entrepreneurship (Finkle, et. al., 2006).

In this study, we break down our sample into three categories: (1) mean for the entire sample, (2) mean for U.S. centers and (3) mean for international centers. We then examined the descriptive statistics for the samples.

**RESULTS/DISCUSSION**

*Table 1: Background & Demographics of Entrepreneurship Directors*
Results of Table 1 indicate that the average center director in the sample was 52 years old and 70% were male. The highest level of education achieved by the directors varied: Ph.D. (62.4%); MBA (24.8%); JD (2.6%); MS (3.2%); MD (.6%); and BS/BA (6.4%). Twenty-three percent of the directors were endowed chairs. Seventy-four percent of the directors were former entrepreneurs with an average of 9.1 years of experience as an entrepreneur.

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Table 2: Characteristics of Centers

The second table shows the characteristics of the entrepreneurship centers in the study. U.S. Centers comprise 70% of our sample. The average age for all of the centers was 10.4 years old. U.S. centers were older (11.4 years) versus international centers (7.9 years).

Eighty seven percent of the centers were located on campus and there were no significant differences between U.S. and international schools. Forty-five percent of the founders were still working at their centers. The average tenure of a founder was 4.8 years. Fifty-one percent of the centers had an associate director. The average size of the college was 3,049 and the average size of the university was 17,869. Out of the entire sample, 68.4% of the schools were public. Forty-three percent of the centers had endowed positions with an average endowment of $2.537 million U.S. Each school had an average of 2.2 endowed positions.
**Table 3: Financial Operations within Centers for Entrepreneurship**

As illustrated in Table 3, the average size of a center’s endowment for the full sample was $3,000,000. The results show that U.S. centers, on average, had $3,519,000 in endowment money versus $1,543,500 from international centers. The average percentage of the centers’ endowment used for operational expenses was 35.8%. The average size of a center’s annual budget was $536,198.

The percentage composition of the budget in order of importance was: (1) University Line items, 26.4%; (2) Grants and Contracts, 21.9%; (3) Endowment, 20.2%; (4) Donations, 14.9%; (5) Outreach Programs, 9.5%, and (6) Other, 7.1%.

The annual operating budget from the University (excluding the Director’s salary and benefits) was $327,190. The annual salary of a director (including summer pay and stipends) was $152,465. There was a significant difference between the average U.S. Director’s salary ($145,948) versus international ($170,957).

The final item in this table examined the percentage of the Director’s annual salary from the University (excluding the Center’s budget). Eighty-seven percent of a Director’s salary comes from the university.

**Table 4: Types of Internal and External Fund-raising Activities at Centers**
Table 4 outlines the various internal and external activities that Centers participate in to raise funds. Overall, the following internal activities are utilized to raise funds (in order of popularity): (1) business plan competitions, (2) student clubs, (3) internships, (4) high tech park/incubator, (5) technology transfer, (6) venture capital fund, (7) distance learning, and (8) journals.

The following external activities are utilized to raise funds (in order of popularity): (1) seminars/workshops, (2) Grants, (3) guest speakers, (4) executive education, (5) entrepreneur of the year program, (6) venture capital fund, (7) incubator, (8) family business program, and (9) FastTrac.

Table 5: Seminar Topics Taught to Raise Funds for Centers (Excluding regular teaching load)

Table 5 outlines the top 10 seminar topics taught by centers to raise funds. Overall, the following seminars topics were taught (in order of popularity): (1) startups, (2) business planning, (3) management, (4) strategic planning, (5) marketing, (6) finance, (7) family business, (8) corporate entrepreneurship, (9) valuations and/or acquisitions, (10) technology transfer.

Table 6: Length and Cost of Each Seminar/Workshop per Participant
Table 6 contains some of the most valuable information from the study. It examines the average length, hourly cost, and overall cost of a seminar. For example, the most profitable seminar for the entire sample focused on international dimensions of entrepreneurship with an average length of 7.68 hours and an average cost of $1,069 or $139 per hour.

When examining the entire sample from an overall cost per seminar basis the following seminars and their respective costs were: corporate entrepreneurship ($1,434), international ($1,069), family business ($866), startups ($624), franchising ($493), management ($488), technology transfer ($465), valuations and/or acquisitions ($444), business planning ($254), strategic planning ($230), accounting ($169), non profits ($168), finance ($167), marketing ($149), and information technology ($47).

When looking at the entire sample from an hourly cost basis the following seminars and their respective costs per hour were: international ($139), corporate entrepreneurship ($130), family business ($85), technology transfer ($80), startups ($67), management ($64), valuations and/or acquisitions ($63), franchising ($62), strategic planning ($32), finance ($23), business planning ($22), marketing ($21), non profits ($21), accounting ($18), and information technology ($6).

When looking at the entire sample based on the average length of time of each seminar topic in hours: startups (13.6), business planning (11.6), corporate entrepreneurship (11), family business (10.1), accounting (9.5), non profits (8.1), franchising (7.9), international (7.7), management (7.6), finance (7.4), information technology (7.3), strategic planning (7.3), marketing (7.2), valuations and/or acquisitions (7.1), technology transfer (5.8).
Table 7: Profitability of Seminars/Workshops

Table 7 outlines the top 15 most profitable seminar topics taught by centers to raise funds. Overall, the most profitable seminar topics were (in order of profitability): (1) corporate entrepreneurship, (2) startups, (3) marketing, (4) valuations and/or acquisitions, (5) finance, (6) business planning, (7) franchising, (8) management, (9) strategic planning, (10) information technology, (11) accounting, (12) technology transfer, (13) family business, (14) international, and (15) non-profits.

Table 8: Factors that Contributed to the Center’s Success in Raising Funds

Table 8 asked directors about what factors contributed to the Center’s success in raising funds. For all of the centers, the top factors that contributed to a Center’s success in raising funds are (in order of importance): (1) programs, (2) students, (3) community entrepreneurs, (4) faculty/staff, (5) alumni, (6) faculty quality, (7) advisory board, (8) administration, (9) marketing, (10) development, (11) conferences, and (12) government.

For U.S. centers, the top five factors that contributed to a Center’s success in raising funds are: (1) students, (2) community entrepreneurs, (3) programs, (4) alumni, and (5) faculty/staff.
For international centers, the top five factors that contributed to a Center’s success in raising funds are: (1) faculty/staff, (2) programs, (3) faculty quality, (4) development, and (5) students.

Table 9: Influx of Substantial Funding to Center

Table 9 asks the directors what they would do if they were to receive an influx of substantial funding to their respective centers.

For all of the centers in the study the top variables that directors would invest in if given a substantial amount of money are (in order of importance): (1) hire staff and/or faculty, (2) programs, (3) operations/capital for center, (4) research support, (5) scholarships for students, (6) outreach, (7) facilities, (8) faculty development, (9) competitions and/or venture capital fund, (10) marketing/growth, and (11) incubator.

For U.S. centers, the top variables that directors would invest in if given a substantial amount of money are: (1) hire staff and/or faculty, (2) programs, (3) operations/capital for center, (4) scholarships for students, and (5) outreach.

For International centers, the top variables that directors would invest in if given a substantial amount of money are: (1) research support, (2) hire staff and/or faculty, (3 tied) outreach and programs, and (5) operations/capital for center.
CONCLUSION & IMPLICATIONS

This purpose of the study was to learn about the finances related to entrepreneurship centers throughout the world. Given the current global economic crisis, this study provides important information for center directors. We collected in-depth data about the finances of these centers and broke down the sample into three categories: the entire sample of entrepreneurship centers, U.S. centers and international centers.

Table 1 examined the background and demographics of entrepreneurship directors (e.g., age, sex, educational background, endowed chair, former entrepreneur, years as an entrepreneur, etc.). The average director had these characteristics: 52 years old and male (79%). The educational characteristics of the directors varied: Ph.D. (62.4%); MBA (24.8%); JD (2.6%); MS (3.2%); MD (.6%); and BS/BA (6.4%). Twenty three percent of the directors were endowed chairs and 74% were former entrepreneurs with an average of 9.1 years of experience as an entrepreneur.

Table 2 shows that the average age of the sample was 10.4 years. There was a significant difference between the age of U.S. (11.4 years) versus international centers (7.9 years). We then examined the location of the centers and found the majority of centers were located on campus (87%). The rest of the centers were located either in an incubator, off campus, or some other location. Forty-five percent of the founders were still working at their centers.

The average tenure of a founder was 4.8 years. Fifty-one percent of the centers had an associate director. The average size of the college and university were 3,049 and 17,869 respectively. Sixty-eight percent of the entire sample was a public school. Forty-
three percent of the centers had endowed positions with an average endowment per position of $2.537 million. Finally, each school had an average of 2.2 endowed positions.

The results of Table 3 show some of the more useful findings of the study. Overall, the average size of a center’s endowment was $3,000,000. U.S. centers, on average, had $3,519,000 in endowment money versus $1,543,500 at international centers. The average percentage of the centers’ endowment used for operational expenses was 35.8%.

The average size of a center’s annual budget was $536,198 (this included the center director’s salary and benefits). The percentage composition of the budget was: University Line Items (26.4%); Grants and Contracts (21.9%); Endowment (20.2%); Donations (14.9%); Outreach Programs (9.5%), and Other (7.1%).

The annual operating budget from the University (excluding the Director’s salary and benefits) was $327,190. The annual salary of a director (including summer pay and stipends) was $152,465. International directors ($170,957) made a significantly larger amount of money than U.S. directors ($145,948). This is an interesting finding and one we cannot justify based on the data of the study. It must also be noted that overall, 87% of a director’s salary came from the University (excluding the Center’s budget).

Table 4 examined the various internal and external activities that Centers participate in to raise funds. The top four internal activities that were utilized to raise funds were: business plan competitions (51%), student clubs (40%), and internships (31%), and high tech park/incubator (25%).

Institutional theory argues that organizations operating in institutionalized environments demonstrate that they are acting in a legitimate manner adopting the
structures and activities that are perceived to be legitimate by their critical external resource providers (Finkle & Deeds, 2001). In essence by adopting the appropriate structures (institutions) the organization increases its legitimacy and is able to use this legitimacy to increase its support and ensure its survival (Dowling & Pfeffer, 1975; Finkle & Deeds, 2001; Meyer & Rowan, 1977). Accordingly, through the various internal activities, centers become more institutionalized, which assists with the legitimacy of the center. As a result centers get more stakeholder buy in and want to become part of the organization.

For example, business plan competitions have gained significant traction over the past decade. From their initial beginnings at schools like the University of Texas’ Moot Corp, they are being used to educate students through experiential learning. They also can be used to generate revenue for a center through donations, grants, and sponsorships from a variety of organizations. These competitions usually generate interest from a variety of students, faculty, administrators, government, and industry. They also help to increase the legitimacy of entrepreneurship centers. Placements at regional, national, and international competitions can assist in the legitimacy of centers. The same can be said about student organizations like Students in Free Enterprise (SIFE) and Collegiate Entrepreneurs’ (CEO), internships, and high tech park/incubator.

In our study we see that centers garnered resources outside their organizations through the top four external (outreach) activities: seminars/workshops (56%), grants (55%), guest speakers (44%), and executive education (41%). The next few tables will evaluate the types of seminars/workshops that centers participate in for funding.
Tables 5-7 are interrelated. Table 5 examines the most popular seminar topics taught by centers. Table 6 looks at the length and cost of each seminar per participant and Table 7 looks at the overall profitability of the different types of seminars.

According to Table 5 the top 10 seminar topics taught by centers to raise funds were (in order of popularity): (1) startups, (2) business planning, (3) management, (4) strategic planning, (5) marketing, (6) finance, (7) family business, (8) corporate entrepreneurship, (9) valuations and/or acquisitions, (10) technology transfer.

Table 6 indicates that the most profitable seminar for the entire sample focused on international with an average length of 7.68 hours and an average cost of $1,069 or $139 per hour. Other seminars, their respective costs, and average hours per seminar were: corporate entrepreneurship ($1434/11 hours), international ($1069/7.7 hours), family business ($866/10.1 hours), startups ($624/13.6 hours), franchising ($493/7.9 hours), management ($488/7.6 hours), technology transfer ($465/5.8 hours), valuations and/or acquisitions ($444/7.1 hours), business planning ($254/11.6 hours), strategic planning ($230/7.3 hours), accounting ($169/9.5 hours), non profits ($168/8 hours), finance ($167/7.4 hours), marketing ($149/7.2 hours), and information technology ($47/7.3 hours).

When looking at the entire sample from an hourly cost basis the following seminars and their respective costs per hour were: international ($139), corporate entrepreneurship ($130), family business ($85), technology transfer ($80), startups ($67), management ($64), valuations and/or acquisitions ($63), franchising ($62), strategic planning ($32), finance ($23), business planning ($22), marketing ($21), non profits ($21), accounting ($18), and information technology ($6).
Table 7 outlines the top 15 most profitable seminar topics taught by centers to raise funds. Overall, the most profitable seminar topics were (in order of profitability): (1) corporate entrepreneurship, (2) startups, (3) marketing, (4) valuations and/or acquisitions, (5) finance, (6) business planning, (7) franchising, (8) management, (9) strategic planning, (10) information technology, (11) accounting, (12) technology transfer, (13) family business, (14) international, and (15) non-profits. It is not surprising that corporate entrepreneurship is the most profitable seminar as we would assume that companies have the resources to pay for this.

Table 8 asked directors about what factors contributed to the Center’s success in raising funds. The top five factors that contributed to a Center’s success in raising funds were (in order of importance): programs, students, community entrepreneurs, faculty/staff, and alumni. For U.S. centers, the top five factors that contributed to a Center’s success in raising funds were: (1) students, (2) community entrepreneurs, (3) programs, (4) alumni, and (5) faculty/staff. For international centers, the top five factors that contributed to a Center’s success in raising funds are: (1) faculty/staff, (2) programs, (3) faculty quality, (4) development, and (5) students.

Table 9 shows the areas in which the directors would direct new funds if they were given an influx of substantial funding to their centers. Overall, the area that the centers would put their new funds towards was the hiring of faculty and/or staff. This is consistent with our previous studies (Finkle & Deeds, 2001; Finkle, et. al., 2006) which found that one of the biggest problems facing centers was finding qualified faculty. Other top areas that directors would devote funds to were: operations/capital for center, research support, and scholarships for students. Given the nature of today’s economic
environment and the decrease in school’s budgets, it is not surprising to learn that funds would be directed towards operations/capital for centers.

The paper gives an overview of the finances of entrepreneurship centers. This study supports the notion of resource dependency theory where firms scan the environment to extract resources to enhance the firm's legitimacy in society and to help it achieve its goals of efficiency and improved performance (Finkle, 1998; Pfeffer 1972, 1973; Price, 1963; Provan, 1980; Zald, 1967). Resource dependence theory proposes that an organization’s survival is contingent on its ability to gain control over critical environmental resources (Finkle, 1998).

**FUTURE RESEARCH**

A stream of potential research in this area should focus on the development of a best practices model based on the finances of entrepreneurship centers. The ideal model related to the finances of an entrepreneurship center is needed. Regression models can be run to determine centers that are able to raise more funds than others. Qualitative studies could be done to determine what actions are done by center directors to raise funds from various stakeholder entities.

**REFERENCES**


**AUTHOR BIOGRAPHIES**

Todd A. Finkle is the Pigott Professor of Entrepreneurship at Gonzaga University.

Teresa V. Menzies is Professor of Entrepreneurship at Brock University.

Michael G. Goldsby is the Stoops Distinguished Professor of Entrepreneurship and Director of the Center for Entrepreneurship at Ball State University.
Don F. Kuratko is the Jack M. Gill Chair of Entrepreneurship, professor of entrepreneurship, and executive director, Johnson Center for Entrepreneurship and Innovation, Kelly School of Business, Indiana University.
# Exhibit 1: Survey Instrument for Study

## SURVEY OF CENTERS FOR ENTREPRENEURSHIP

<table>
<thead>
<tr>
<th>Dr. Todd A. Finkle</th>
<th>Dr. Donald F. Kuratko</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitzgerald Institute for Entrepreneurial Studies</td>
<td>Johnson Center for Entrepreneurship</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>Kelley School of Business</td>
</tr>
<tr>
<td>The University of Akron</td>
<td>Indiana University</td>
</tr>
<tr>
<td>259 S. Broadway, Akron, Ohio 44325-4801</td>
<td>Bloomington, Indiana 47405-1703</td>
</tr>
<tr>
<td>Phone 330-972-8479/FAX 330-972-6588</td>
<td>Phone 812-855-4248</td>
</tr>
<tr>
<td>Michael G. Goldsby</td>
<td>Dr. Teresa V. Menzies</td>
</tr>
<tr>
<td>The Entrepreneurship Program</td>
<td>Faculty of Business</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>Brock University</td>
</tr>
<tr>
<td>Ball State University</td>
<td>Taro Hall 427</td>
</tr>
<tr>
<td>Muncie, IN 47306</td>
<td>St. Catherines, Ontario Canada</td>
</tr>
<tr>
<td><a href="mailto:mgoldsby@bsu.edu">mgoldsby@bsu.edu</a></td>
<td>Phone 905-688-5550 Ext. 4118</td>
</tr>
</tbody>
</table>

---

**ASSESSING THE FINANCES OF CENTERS FOR ENTREPRENEURSHIP**

The purpose of this survey is to enhance entrepreneurship education throughout the world. From this and other surveys, a data bank will be established enabling Directors of Centers for Entrepreneurship to compare their financial practices with other Centers and to see the impact of their practices on success.

**NOTE: All of your responses are strictly confidential;** individual responses will not be seen by anyone within your organization, other schools, or entities. We will strictly prohibit the access of this data by unauthorized individuals or organizations. If you have any questions, please call Dr. Todd A. Finkle at finklet@uakron.edu, Dr. Donald F. Kuratko dkuratko@indiana.edu, Dr. Michael Goldsby mgoldsby@bsu.edu or Dr. Teresa V. Menzies tmenzies@brocku.ca.

WE APPRECIATE YOUR PARTICIPATION!!

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name of the Center?</td>
<td>____________________________</td>
</tr>
<tr>
<td>2. Address of the Center?</td>
<td>____________________________</td>
</tr>
<tr>
<td>3. What year was your Center for Entrepreneurship founded?</td>
<td>____________________________</td>
</tr>
<tr>
<td>4. Were you a founder of the Center? YES ___ NO ___</td>
<td></td>
</tr>
<tr>
<td>5. How long have you been the Director of the Center?</td>
<td>____</td>
</tr>
<tr>
<td>6. Does your Center have an Academic, Associate or co-Director? What are their responsibilities? YES ___ NO ___</td>
<td></td>
</tr>
<tr>
<td>7. Does the Center have any endowed positions in entrepreneurship? How many? How much is endowed?</td>
<td>Yes ____ No ____ # ____ Amount Endowed _______________</td>
</tr>
<tr>
<td>8. How big is your university (# students)?</td>
<td>________</td>
</tr>
<tr>
<td>9. How big is your College (Faculty) (# students)?</td>
<td>________</td>
</tr>
<tr>
<td>10. Are you a public or private university? Public ____ Private ____</td>
<td></td>
</tr>
</tbody>
</table>
11. What types of internal fund-raising activities does your Center participate in (check only if it is done to raise outside funds: you may choose more than one)?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internships</td>
<td></td>
</tr>
<tr>
<td>Distance Learning</td>
<td></td>
</tr>
<tr>
<td>Technology Transfer</td>
<td></td>
</tr>
<tr>
<td>Student Clubs</td>
<td></td>
</tr>
<tr>
<td>Venture Capital Fund</td>
<td></td>
</tr>
<tr>
<td>Harvard Student Agencies</td>
<td></td>
</tr>
<tr>
<td>Journals</td>
<td></td>
</tr>
<tr>
<td>Business Plan Competitions</td>
<td></td>
</tr>
<tr>
<td>High Tech Park/Incubator</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

12. What types of external (outreach) fund-raising activities does your Center participate in (check only if it is done to raise outside funds: you may choose more than one)?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminars/Workshops</td>
<td></td>
</tr>
<tr>
<td>Executive Education</td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td></td>
</tr>
<tr>
<td>Guest Speakers</td>
<td></td>
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<tr>
<td>High Tech Park/Incubator</td>
<td></td>
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<tr>
<td>FastTrac</td>
<td></td>
</tr>
<tr>
<td>Family Business Program</td>
<td></td>
</tr>
<tr>
<td>Entrepreneur of the Year Program</td>
<td></td>
</tr>
<tr>
<td>Venture Capital Fund</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

13. Under what topics do you teach seminars/workshops related to entrepreneurship to raise funds for your program (this excludes your regular teaching load; you can select more than one)?

<table>
<thead>
<tr>
<th>Topic</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td></td>
</tr>
<tr>
<td>Corporate ENT</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

14. Under each area that you teach seminars/workshops, please give the specific topic which you teach to raise funds for your program (write the area next to each topic; e.g., Finance financial statement analysis).

<table>
<thead>
<tr>
<th>Area</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Management</td>
</tr>
<tr>
<td>Finance</td>
<td>Technology Transfer</td>
</tr>
<tr>
<td>Marketing</td>
<td>Family Business</td>
</tr>
<tr>
<td>IT</td>
<td>Franchising</td>
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<tr>
<td>Corporate ENT</td>
<td>Non-Profit</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

15. What is the typical length of a seminar/workshop for each topic that you teach (in hours)?

<table>
<thead>
<tr>
<th>Area</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>IT</td>
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<tr>
<td>Corporate ENT</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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</tbody>
</table>

16. How much do you charge each participant for each seminar/workshop?

<table>
<thead>
<tr>
<th>Area</th>
<th>Charge</th>
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</thead>
<tbody>
<tr>
<td>Accounting</td>
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<tr>
<td>Finance</td>
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<tr>
<td>Corporate ENT</td>
<td></td>
</tr>
<tr>
<td>Other</td>
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</tbody>
</table>
17. Please score the following seminars/workshops you present as to their profitability to your Center: (1) Highly Unprofitable, (2) Unprofitable (3) Breakeven, (4) Profitable, and (5) Highly Profitable.

- Accounting
- Management
- Valuation/Acquisitions
- Finance
- Technology Transfer
- Strategic Planning
- Marketing
- Family Business
- Business Planning
- IT
- Franchising
- Startups
- Corporate ENT
- Non-Profit
- International
- Others

18. Why are your seminars/workshops successful?

19. To which organizations/foundations have you applied for an external grant?

- Kauffman
- Knight
- SBA
- City
- Coleman
- Burton Morgan
- NCIIA
- Sloan
- NSF
- State
- Dobson
- Dobson
- SSHRC
- CIHR
- Others

20. From which organizations have you received an external grant?

- Kauffman
- Knight
- SBA
- City
- Coleman
- Burton Morgan
- NCIIA
- Sloan
- NSF
- State
- Dobson
- Dobson
- SSHRC
- CIHR
- Others

21. Please list the year, organization, topic of the subject, amount of money, and why you were successful in receiving each “grant” over the past 5 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>Subject</th>
<th>Amount</th>
<th>Success</th>
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</tbody>
</table>

22. Please list the year, organization, topic of the subject, amount of money, and why you were successful in receiving each “contract” (money received for services rendered) over the past 5 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>Subject</th>
<th>Amount</th>
<th>Success</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>


23. Does your University Development office (external relations dept.) and/or Faculty Development Office assist you in raising funds? If yes, how do they do this and how has it benefited your Center?

24. Has your development office hindered your fundraising? If so, how did they hinder you, and how has it had a negative impact on your Center?

25. What other key challenges or obstacles to fund-raising has your Center faced?

26. What specific factors have contributed to your Center’s success in raising funds for your program (Please rank either: (1) Very Negative Impact, (2) Negative Impact, (3) No Impact, (4) Positive Impact, (5) Very Positive Impact).

   Administration ___ Students ___ Conferences ___
   Faculty Quality ___ Development ___ Government ___
   Programs ___ Alumni ___ Community entrepreneurs ___
   Advisory Board ___ Government ___
   Marketing ___ Faculty/Staff ___
   Other (Please specify) ____________________________________________

27. What are the specific keys to your success in trying to raise funds for your Center?

   ____________________________________________________________________
   ____________________________________________________________________

28. How large is your Center’s endowment in US dollars? ______

29. What percent of your endowment can be used for operational expenses (e.g., staff, stipends, phone, travel, etc.)? ______

30. What is your total annual budget in US dollars? ______

31. What percentage of your annual budget comes from

   Endowment (interest and/or principal: Specify below) ___ Grants and contracts ___
   Outreach programs ___ Donations ___
   University Line Items ___
   Other (Please specify) _____________________________________________________
32. What is your annual operating budget from the University (excluding the Director’s Salary & Benefits)?

- $0
- $25,001-50,000
- $100,001-150,000
- $200,001-250,000
- $300,001-350,000
- $400,001-500,000
- $500,001-600,000
- $600,001-700,000
- $700,001-800,000

Other (Please specify) _________________________________________

33. What is your annual salary (including summer pay and stipends)?

- $0-$24,999
- $25,000-50,000
- $50,001-75,000
- $75,001-100,000
- $100,001-125,000
- $125,001-150,000
- $150,001-175,000
- $175,001-200,000
- $200,001-250,000
- $250,001-300,000

Other (Please specify) _________________________________________

34. What percentage of your annual salary comes from the University (excluding the Center’s budget)?

- 0-10%
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91-100%

Other (Please specify) _________________________________________

35. What percentage of your salary comes from the Center’s budget?

- 0-10%
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91-100%

Other (Please specify) _________________________________________

36. What perks (e.g., expense account, travel allowances, etc.) do you receive for being the Director of your Center? (Please specify)

37. What is your teaching load during a nine month academic year (if your school is on a trimester system, please insert the number of courses you teach per session into the Other box; e.g., in Canada they typically teach three terms; Fall, Winter, and Spring/Summer so insert 2/2/1)?

- 0/1
- 2/1
- 3/1
- 4/1

I don’t teach

Other_____________________________________________________

38. Do you teach over the summer? If so, how many courses do you teach?

39. What are the 2007 rankings of your program? (Leave blank if you are not ranked)

- U.S. News and World Report
- Business Week
- Entrepreneur

40. What honors has your program received?
41. Have you ever been an entrepreneur of a startup? YES __ NO__

42. If so, how many businesses and for how many years did you operate each business?

43. What is your rank and title?

44. Is your position an endowed chair? YES __ NO__

45. What is your educational background (Highest level achieved)?
   Ph.D. __ MBA __ EdD __ JD __ MD __ BS __ BA __ High School __ Other ____

46. What is your age? ____

47. Male or Female (Circle One)

---

Thank you once again for filling out the survey. All of your responses will be strictly confidential; individual responses will not be seen by anyone within your organization, other schools, or entities. We will strictly prohibit the access of this data by unauthorized individuals or organizations. If you have any questions, please contact Dr. Todd A. Finkle at finklet@uakron.edu, Dr. Donald F. Kuratko dkuratko@indiana.edu, Dr. Michael Goldsby mgoldsby@bsu.edu or Dr. Teresa V. Menzies tmenzies@brocku.ca.
### Table 1: Background & Demographics of Entrepreneurship Directors

<table>
<thead>
<tr>
<th></th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>52</td>
<td>52.6</td>
<td>50.8</td>
</tr>
<tr>
<td><strong>Sex (Male)</strong></td>
<td>79%</td>
<td>81%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Educational Background (#)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD’s/EDd</td>
<td>98</td>
<td>71</td>
<td>27</td>
</tr>
<tr>
<td>MBAs</td>
<td>39</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>JD</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>MS</td>
<td>5</td>
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</tr>
<tr>
<td>MD</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>BS/BA</td>
<td>10</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td><strong>Endowed Chair</strong></td>
<td>23%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Started a Business</strong></td>
<td>74%</td>
<td>76%</td>
<td>67%</td>
</tr>
<tr>
<td><strong># Years as an Entrepreneur</strong></td>
<td>9.1</td>
<td>9.74</td>
<td>7.4</td>
</tr>
</tbody>
</table>

* p < .05.

** p < .01.

*** p < .001.
<table>
<thead>
<tr>
<th></th>
<th>All Centers N=174 Mean</th>
<th>US Centers N=122 Mean</th>
<th>International Centers N=52 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of Center (yrs)</td>
<td>10.4</td>
<td>11.4</td>
<td>7.9</td>
</tr>
<tr>
<td>Location (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On campus</td>
<td>87.3</td>
<td>88.5</td>
<td>84.3</td>
</tr>
<tr>
<td>In Incubator</td>
<td>5.2</td>
<td>4.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Off Campus</td>
<td>4.6</td>
<td>4.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Other</td>
<td>2.9</td>
<td>1.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Founder (%)</td>
<td>45%</td>
<td>39%</td>
<td>58%</td>
</tr>
<tr>
<td>Tenure of Founder (yrs)</td>
<td>4.8</td>
<td>4.7</td>
<td>5.1</td>
</tr>
<tr>
<td>Associate Director (%)</td>
<td>51%</td>
<td>50%</td>
<td>54%</td>
</tr>
<tr>
<td>Size of College</td>
<td>3,049</td>
<td>2,657</td>
<td>4,104</td>
</tr>
<tr>
<td>Public University (%)</td>
<td>68.4%</td>
<td>62.3%</td>
<td>83%</td>
</tr>
<tr>
<td>Total # of Students at School</td>
<td>17,869</td>
<td>18,386</td>
<td>16,565</td>
</tr>
<tr>
<td>Endowed Position(s) (%)</td>
<td>43%</td>
<td>46%</td>
<td>35%</td>
</tr>
<tr>
<td># Endowed Positions (N=97)</td>
<td>2.2</td>
<td>2.3</td>
<td>1.9</td>
</tr>
<tr>
<td>$ Endowed per Position (Million)</td>
<td>2.537</td>
<td>2.685</td>
<td>1.50</td>
</tr>
</tbody>
</table>

* p < .05.
** p < .01.
*** p < .001.
<table>
<thead>
<tr>
<th></th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Center’s Endowment ($)</td>
<td>3,000,000</td>
<td>3,519,000</td>
<td>1,543,500</td>
</tr>
<tr>
<td>% Endowment Used for Operational Expenses</td>
<td>35.80</td>
<td>33.12</td>
<td>46.06</td>
</tr>
<tr>
<td>Size of Center’s Annual Budget ($)</td>
<td>536,198</td>
<td>515,793</td>
<td>586,984</td>
</tr>
<tr>
<td>% Composition of the Budget:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endowment</td>
<td>20.17</td>
<td>22.44</td>
<td>14.80</td>
</tr>
<tr>
<td>Grants &amp; Contracts</td>
<td>21.94</td>
<td>17.57</td>
<td>32.06</td>
</tr>
<tr>
<td>Outreach Programs</td>
<td>9.47</td>
<td>8.58</td>
<td>11.53</td>
</tr>
<tr>
<td>Donations</td>
<td>14.90</td>
<td>18.93</td>
<td>5.67</td>
</tr>
<tr>
<td>University Line Items</td>
<td>26.40</td>
<td>26.96</td>
<td>25.10</td>
</tr>
<tr>
<td>Other</td>
<td>7.12</td>
<td>5.31</td>
<td>9.47</td>
</tr>
<tr>
<td>Annual Operating Budget from the University (excluding the Director’s Salary &amp; Benefits)</td>
<td>327,190</td>
<td>326,438</td>
<td>329,560</td>
</tr>
<tr>
<td>Annual Salary of Director (including summer pay and stipends)</td>
<td>152,465</td>
<td>145,948</td>
<td>170,957</td>
</tr>
<tr>
<td>% of Director’s Annual Salary from the University (excluding the Center’s budget)</td>
<td>87.32</td>
<td>89.25</td>
<td>82.93</td>
</tr>
</tbody>
</table>

* p < .05.

** p < .01.

*** p < .001.
### Table 4: Types of Internal and External Fund-raising Activities at Centers

<table>
<thead>
<tr>
<th></th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Programs %</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Plan Competition</td>
<td>51</td>
<td>53</td>
<td>44</td>
</tr>
<tr>
<td>Student Clubs</td>
<td>40</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>Internships</td>
<td>31</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td>High Tech Park/Incubator</td>
<td>25</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>21</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>Venture Capital Fund</td>
<td>18</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Distance Learning</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Journals</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>External (Outreach) Programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars/Workshops</td>
<td>56</td>
<td>53</td>
<td>64</td>
</tr>
<tr>
<td>Grants</td>
<td>55</td>
<td>56</td>
<td>54</td>
</tr>
<tr>
<td>Guest Speakers</td>
<td>44</td>
<td>48</td>
<td>35</td>
</tr>
<tr>
<td>Executive Education</td>
<td>41</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td>ENT of the Year Program</td>
<td>21</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>Venture Capital Fund</td>
<td>18</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Incubator</td>
<td>18</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Family Business Program</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>FastTrac</td>
<td>8</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001
### Table 5: Seminar Topics Taught to Raise Funds for Centers (Excluding regular teaching load)

<table>
<thead>
<tr>
<th>Areas %</th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startups</td>
<td>41</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>Business Planning</td>
<td>31</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>Management</td>
<td>29</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>26</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>Marketing</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Finance</td>
<td>22</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Family Business</td>
<td>20</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>Corporate Entrepreneurship</td>
<td>20</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>Valuations &amp;/or Acquisitions</td>
<td>18</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>18</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Non Profits</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>International</td>
<td>12</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Accounting</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Franchising</td>
<td>6</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Information Technology</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

* p < .05.

** p < .01.

*** p < .001.
Table 6: Length and Cost of Each Seminar/Workshop per Participant

<table>
<thead>
<tr>
<th>Areas (%)</th>
<th>All Centers Mean</th>
<th>US Centers Means</th>
<th>International Centers Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours</td>
<td>Cost</td>
<td>Hourly Cost</td>
</tr>
<tr>
<td>International</td>
<td>7.68</td>
<td>1069.09</td>
<td>139.23</td>
</tr>
<tr>
<td>Corporate Entrepreneurship</td>
<td>10.98</td>
<td>1433.96</td>
<td>130.64</td>
</tr>
<tr>
<td>Family Business</td>
<td>10.14</td>
<td>865.85</td>
<td>85.40</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>5.81</td>
<td>465.35</td>
<td>80.08</td>
</tr>
<tr>
<td>Management</td>
<td>7.63</td>
<td>488.17</td>
<td>63.97</td>
</tr>
<tr>
<td>Valuation/Acquisitions</td>
<td>7.09</td>
<td>444.47</td>
<td>62.71</td>
</tr>
<tr>
<td>Franchising</td>
<td>7.93</td>
<td>493.21</td>
<td>62.17</td>
</tr>
<tr>
<td>Startups</td>
<td>13.55</td>
<td>624.27</td>
<td>46.07</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>7.28</td>
<td>229.51</td>
<td>31.53</td>
</tr>
<tr>
<td>Finance</td>
<td>7.42</td>
<td>167.17</td>
<td>22.52</td>
</tr>
<tr>
<td>Non Profits</td>
<td>8.06</td>
<td>168.36</td>
<td>20.90</td>
</tr>
<tr>
<td>Marketing</td>
<td>7.19</td>
<td>148.53</td>
<td>20.65</td>
</tr>
<tr>
<td>Accounting</td>
<td>9.48</td>
<td>168.88</td>
<td>17.82</td>
</tr>
<tr>
<td>Information Technology</td>
<td>7.34</td>
<td>46.54</td>
<td>6.34</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01.
*** p < .001.
Table 7: Profitability of Seminars/Workshops

<table>
<thead>
<tr>
<th>Areas</th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Entrepreneur</td>
<td>3.46</td>
<td>3.27</td>
<td>3.86</td>
</tr>
<tr>
<td>Startups</td>
<td>3.35</td>
<td>3.29</td>
<td>3.50</td>
</tr>
<tr>
<td>Marketing</td>
<td>3.27</td>
<td>3.19</td>
<td>3.45</td>
</tr>
<tr>
<td>Valuation/Acquisitions</td>
<td>3.23</td>
<td>3.11</td>
<td>3.54</td>
</tr>
<tr>
<td>Finance</td>
<td>3.21</td>
<td>3.10</td>
<td>3.53</td>
</tr>
<tr>
<td>Business Planning</td>
<td>3.13</td>
<td>3.02</td>
<td>3.44</td>
</tr>
<tr>
<td>Franchising</td>
<td>3.13</td>
<td>2.94</td>
<td>3.57</td>
</tr>
<tr>
<td>Management</td>
<td>3.11</td>
<td>3.02</td>
<td>3.38</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>2.97</td>
<td>2.70</td>
<td>3.46</td>
</tr>
<tr>
<td>Information Technology</td>
<td>2.96</td>
<td>2.77</td>
<td>3.60</td>
</tr>
<tr>
<td>Accounting</td>
<td>2.95</td>
<td>2.86</td>
<td>3.14</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>2.93</td>
<td>3.03</td>
<td>2.64</td>
</tr>
<tr>
<td>Family Business</td>
<td>2.74</td>
<td>2.55</td>
<td>3.18</td>
</tr>
<tr>
<td>International</td>
<td>2.68</td>
<td>2.71</td>
<td>2.58</td>
</tr>
<tr>
<td>Non Profits</td>
<td>2.57</td>
<td>2.50</td>
<td>2.71</td>
</tr>
</tbody>
</table>

Likert scale where (1) Highly Unprofitable, (2) Unprofitable (3) Breakeven, (4) Profitable, and (5) Highly Profitable.

* p < .05

** p < .01.

*** p < .001.
### Table 8: Factors that Contributed to the Center’s Success in Raising Funds

<table>
<thead>
<tr>
<th>Factors</th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td>4.122</td>
<td>4.156</td>
<td>4.043</td>
</tr>
<tr>
<td>Students</td>
<td>4.084</td>
<td>4.229</td>
<td>3.733</td>
</tr>
<tr>
<td>Community Entrepreneurs</td>
<td>4.043</td>
<td>4.202</td>
<td>3.667</td>
</tr>
<tr>
<td>Faculty/Staff</td>
<td>4.030</td>
<td>4.017</td>
<td>4.063</td>
</tr>
<tr>
<td>Alumni</td>
<td>4.006</td>
<td>4.155</td>
<td>3.667</td>
</tr>
<tr>
<td>Faculty Quality</td>
<td>3.997</td>
<td>3.991</td>
<td>4.000</td>
</tr>
<tr>
<td>Advisory Board</td>
<td>3.904</td>
<td>4.000</td>
<td>3.674</td>
</tr>
<tr>
<td>Administration</td>
<td>3.720</td>
<td>3.813</td>
<td>3.489</td>
</tr>
<tr>
<td>Marketing</td>
<td>3.700</td>
<td>3.741</td>
<td>3.587</td>
</tr>
<tr>
<td>Development</td>
<td>3.670</td>
<td>3.595</td>
<td>3.841</td>
</tr>
<tr>
<td>Conferences</td>
<td>3.638</td>
<td>3.604</td>
<td>3.717</td>
</tr>
<tr>
<td>Government</td>
<td>3.333</td>
<td>3.183</td>
<td>3.674</td>
</tr>
</tbody>
</table>


* p  < .05

** p  < .01.

*** p  < .001.
### Table 9: Influx of Substantial Funding to Center

<table>
<thead>
<tr>
<th>Variables %</th>
<th>All Centers Mean</th>
<th>US Centers Mean</th>
<th>International Centers Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hire Staff and/or Faculty</td>
<td>.368</td>
<td>.392</td>
<td>.310</td>
</tr>
<tr>
<td>Programs</td>
<td>.292</td>
<td>.343</td>
<td>.167</td>
</tr>
<tr>
<td>Operations/Capital for Center</td>
<td>.153</td>
<td>.177</td>
<td>.095</td>
</tr>
<tr>
<td>Research Support</td>
<td>.146</td>
<td>.069</td>
<td>.333</td>
</tr>
<tr>
<td>Scholarships for Students</td>
<td>.132</td>
<td>.167</td>
<td>.048</td>
</tr>
<tr>
<td>Outreach</td>
<td>.125</td>
<td>.108</td>
<td>.167</td>
</tr>
<tr>
<td>Facilities</td>
<td>.076</td>
<td>.078</td>
<td>.071</td>
</tr>
<tr>
<td>Faculty Development</td>
<td>.065</td>
<td>.065</td>
<td>.065</td>
</tr>
<tr>
<td>Competitions and/or Venture Capital Fund</td>
<td>.056</td>
<td>.078</td>
<td>.000</td>
</tr>
<tr>
<td>Marketing/Growth</td>
<td>.042</td>
<td>.049</td>
<td>.024</td>
</tr>
<tr>
<td>Incubator</td>
<td>.035</td>
<td>.029</td>
<td>.048</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01.

***p < .001.
SME Performance: The Role of Learning Orientation and Its Relationship to Market Orientation and Entrepreneurial Orientation

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Fax: (316) 978-3349
email: jim.wolff@wichita.edu
SME Performance: The Role of Learning Orientation and Its Relationship to Market Orientation and Entrepreneurial Orientation

ABSTRACT: This paper examines the role that a learning orientation plays with respect to entrepreneurial orientation, market orientation, and, ultimately, the performance of SMEs. The theoretical underpinnings for each of these constructs is discussed and integrated to form hypotheses about the relationships to be found in small firms. The hypotheses are tested on a sample of SME manufacturing firms. Results confirm many of the hypothesized relationships.

Keywords: SME Performance, Entrepreneurial Orientation, Market Orientation, Learning Orientation.
TOPIC AND RESEARCH QUESTION

Organization learning has long been an important topic of interest to organizational researchers (Hedberg 1981; Nonaka 1994; Cohen & Levinthal 1990). The premise underlying an organization learning capability is that it facilitates flexibility, opportunities for growth, and overall better performance in those firms that possess such a capability. Simply stated, a learning capability is thought to facilitate organizational adaptation in the face of negative and positive exogenous forces. This paper reasons that the ability to learn may be particularly important to small and medium-sized enterprises (SMEs) in their quest for survival and growth in the face of an environment that can be particularly hostile to smaller firms. From this overarching logic is derived the central research question for the paper: What internal dynamic is at work in the SME learning process that can lead to growth and higher levels of performance?

To address the research question the paper builds on the work of previous research that examined the market orientation (MO) construct (Jaworski, Kohli & Kumar 1993), the entrepreneurial orientation (EO) construct (Covin & Slevin 1986), and the relationship between MO, EO and SME performance (e.g., Baker & Sinkula 2009). These underlying constructs, MO and EO, can be viewed as action oriented dimensions of SME behavior each of which embody important manifestations of learning. Market Orientation is comprised of the actions that firms take with respect to understanding their customers; customer’s needs; and taking the appropriate actions in response. Entrepreneurial orientation is comprised of risk taking, innovativeness, and pro-activeness of the firm. Each of the constructs (MO and EO) in their operationalization demonstrates a proclivity for action. Action in an organizational setting is argued to be the result of an internal organizational dynamic that drives action as a result of information gathering, processing and knowledge creation regarding the actions to be taken. Thus, an antecedent
construct or constructs are likely present that ‘sets the stage’ for the requisite efforts, decisions, and actions implied by the notion of MO and EO.

The paper proposes that the notion of a learning orientation (LO) (Sinkula, Baker & Noordewier 1997) is an antecedent construct important in the organizational learning process and creates the necessary internal organizational environment for MO and EO to be effective influencers of SME performance. As proposed by Sinkula, et al. (1997) LO is a set of values exhibited by the organization that demonstrates whether or not the organization is likely to develop a learning culture. Absent a learning culture it is axiomatic that organization learning will likely be dramatically reduced if not missing entirely.

The purpose of the paper is to explore and empirically test the general notion that firm values when coupled with appropriate behaviors can lead to enhanced performance. Specifically we examine in the following sections the relationship between LO, MO, EO and the growth of small firms. A contribution that this research makes is to link theoretically and to test empirically the relationship between three constructs discussed above that have yet to be linked. In so doing we shed light on one mechanism for how organization values (i.e. learning) coupled with entrepreneurial behaviors and customer directed behaviors may contribute to organizational growth performance.

A second important contribution our research makes is to argue for clarity at the meta-construct level to more accurately specify theoretical relationships that model important organizational processes. We argue that significant confusion exists in the literature with respect to the term ‘orientation.’ As we show, some ‘orientations’ in the literature are philosophical and values-based constructs and some ‘orientations’ are behavioral and action-based constructs. We
present a general model that illustrates the intervening role of the behavioral meta-construct between organizational values and organizational performance.

The paper is organized as follows. We begin with a presentation of the values-behavior-performance arguments and explication of the confusion with respect to the term ‘orientation’. Next we discuss the theory underlying the constructs used in this paper. From the theoretical underpinning we present arguments for the hypothesized relationships between the constructs of interest. Following the hypotheses we present a discussion of our empirical methodology, the operational measures of the constructs, and the statistical analysis used to test the hypothesized relationships. We then provide the results of our analysis, a discussion of our interpretation of the results, and a discussion of the limitations of the research. Last we provide concluding remarks that address the implications and the directions for future research.

BACKGROUND

The term ‘orientation’ as it is employed in the organizational research literature is a common descriptor with an imprecise connotation. The American Heritage Dictionary (2007) defines orientation as “the act of orienting or the state of being oriented” (emphasis added). To ‘act’ is the process of doing while ‘state’ is condition with respect to attributes. In organizational research numerous constructs are articulated as orientation. Examples are ‘market’ orientation (Kohli & Jaworski, 1990), ‘role’ orientation (Parker, 2007), ‘motivation’ orientation (Schei & Rognes, 2005), ‘external’ orientation (Zhang, MacPherson, & Jones, 2006) and the constructs we examine in this study ‘learning’ orientation (Sinkula, et al., 1997) and ‘entrepreneurial’ orientation (Miller, 1983; Covin & Slevin, 1986). From each orientation label one cannot determine whether it is an action or a state construct. Absent a careful, clear, and consistent
articulation of a construct based on its original conceptualization, empirical tests and analyses can yield spurious or confusing results which muddy rather than clarify our understanding.

Two situations illustrate the issues that arise when logical inconsistencies occur in research. The first situation develops when researchers operationalize and measure theoretical constructs with dimensions that confuse or mix the action or state notion of an orientation construct. As it was originally conceptualized by Sinkula, et al. (1997) learning orientation (LO) is a set of values:

“Central to the organization’s learning orientation is the fundamental value it holds toward learning. This value influences whether an organization is likely to develop a learning culture.” (p. 309)

As such, values and culture represent a condition of being, therefore LO is a state construct as originally conceptualized.

In a recent study that examined the relationship between LO, firm innovation and performance Calantone, Cavusgil and Zhao (2002) operationalized LO as commitment to learning, shared vision, and open-mindedness as originally conceived by Sinkula, et al. (1997). However, also included in the operationalization of LO was ‘intra-organizational knowledge sharing’ defined as “. . . behavioral routines related to the spread of learning among different units within an organization” (Calantone, et al., 2002: 517). Clearly the added measure is a behavioral action dimension that is inconsistent with the original state LO construct, thus empirically derived results may be questioned based on logical inconsistency.
The second situation (more fully developed in the sections that follow) is where the relationship between ‘orientations’ are examined with respect to a dependent variable. Though researchers have examined the LO → Performance relationship (e.g. Baker & Sinkula 1999; Farrel & Oczkowski, 2002), this examination is akin to attitude → consequence research without examining the intermediate behavioral action variable. In other words attitudes do not by themselves lead to consequences. It is only when attitudes lead to behavior that consequences result. Similarly, an organizational state does not lead to performance in the absence of organizational action shaped by organizational state. We propose the generalized conceptual model that is illustrated in Figure 1. In this model we argue for the logic that organizational values influence organizational actions which, in turn, yield organizational outcomes.

**THEORY AND HYPOTHESIS DEVELOPMENT**

**Learning Orientation**

Organizational scholars have devoted significant attention to the topic of learning at the organization level during the last three decades. Since the seminal work of Argyris and Shön (1978) research into organizational learning has grown exponentially with many significant contributions occurring in the latter half of this period. One of the key beliefs driving this interest is the importance that learning has to a firm’s adaptability in dynamic environmental or competitive conditions (Moingeon & Edmundson, 1996). “Organizational learning occurs when members of the organization act as learning agents for the organization, responding to changes in the internal and external environments of the organization by detecting and correcting errors in organizational theory in use, and embedding the results of their inquiry in private images and shared maps of the organization” (Argyris & Shön 1978: 23). A central issue in studies of
organization learning is the achievement of different understandings, interpretations and insights with respect to the organization or its environment (Daft & Weick 1984).

The ability of a firm to interpret situations differently, recognize counter-intuitive patterns, and arrive at non-obvious conclusions is recognized as double-loop organizational learning (Lei, Hitt & Bettis, 1996). Alvarez and Busenitz (2001) argue that, in the context of resource-based theory, double-loop heuristic-based learning is much more likely to allow a firm to create or recognize valuable, rare, difficult to imitate and exploitable ideas faster and more effectively which may yield superior performance. Therefore the notion that organization learning—as a broadly construed construct—can yield performance improvements is logically appealing and is an important element with respect to understanding organizational function.

Conceptually, organizational learning is a meta-construct that is comprised of three constituent elements: a pre-disposition to learn; learning facilitation; and exploitation of learning through organizational adaptation (Sinkula et al., 1997). A pre-disposition to learn at the organization level is expressed by the philosophy-in-use and culture regarding learning. Sinkula et al. (1997) articulated this predisposition as a values-based cultural construct and termed it a ‘learning orientation’ (LO). The second element, learning facilitation, is captured by the ability of an organization to recognize, assimilate, and apply new information and knowledge. Cohen and Levinthal (1990) coined the phrase ‘absorptive capacity’ to represent this organizational ability. The third element of organization learning captures the notion that learning results in some changed perception or an insight not previously identified that yields a changed pattern of action by a part or the whole of an organization. The issue of exploitation cannot be captured by one construct due to myriad actions that may be undertaken under the auspices of learning.
We deconstruct the notion of organizational learning to distinguish LO as a focal construct in our research. Organization-level learning begins with the commonly held firm values of open-mindedness and commitment to learning that Sinkula, et al. (1997) articulated as the elements of LO. Open-mindedness is a precondition to the learning process because firms must be willing to question routines and assumptions that comprise the mental models (Senge, 1990) which drive thought and action. The willingness to question deeply held assumptions and beliefs may facilitate heuristics and non-routine mechanisms to divine insights and counter-intuitive patterns that solve ambiguous challenges, i.e., double-loop learning (Lei, Hitt, & Bettis, 1996).

Concomitant with open-mindedness is the value that the collective of individuals comprising a firm places on learning, in other words a commitment to learning (Sinkula, et al., 1997). Just as firms are not homogeneous with respect to structural organization they are likely to have very different views with respect to learning. Morgan (1986) conceptualized the culture dimension as a continuum anchored by hierarchical mechanistic organizations on one end and heterarchical network organizations at the other. The cultural values with respect to learning in a machine organization are likely much weaker than in the more organic network organization. Absent the values that reflect a commitment to learning, learning and adaptation is not likely. Hence, LO, at minimum, requires the elements of open-mindedness and a commitment to learning as a precursor for organizational learning and ultimately successful adaptation.

**Entrepreneurial Orientation**

The fundamental proposition that underpins entrepreneurial orientation (EO) as a significant theoretical construct is that entrepreneurial firms behave in ways different from other
types of firms. Within the field of entrepreneurship and, to a somewhat lesser extent, strategic management research entrepreneurial orientation (EO) has come to be an important construct in the study of entrepreneurial firms or corporate entrepreneurship. Miller’s (1983) conceptualization of EO was operationalized (Covin & Slevin, 1989), refined and developed (Lumpkin & Dess, 1996) and has a substantial literature taking shape around the construct (e.g., Covin & Slevin, 1991; Covin, Green, & Slevin, 2006; Lumpkin & Dess, 1996; Richard, Barnett, Dwyer & Chadwick, 2004). The dimensions most closely associated with the EO construct—those at the heart of Miller’s (1983) original conceptualization of the notion of entrepreneurial firms—are risk taking, innovativeness, and being proactive.

**Risk Taking.** Entrepreneurs are generally regarded as risk takers in terms of their decision-making and business activities. Brockhaus (1980) described entrepreneurs as willing to take calculated business risks that non-entrepreneurs viewed as higher risk. Later research on risk taking proposes that entrepreneurs view certain business situations more optimistically and with more confidence than do non-entrepreneurs (Palich & Bagby, 1995; Busenitz, 1999) leading to the contention that entrepreneurs may view risk differently than non-entrepreneurs. However, consistent with Miller (1983) and Covin and Slevin (1989), firm-level entrepreneurial characteristics are exhibited by a pioneering pattern of decision making under uncertainty reflective of risk at a level greater than that exhibited by a conservative, follower pattern.

**Innovativeness.** A fundamental element of entrepreneurship is innovation which is captured in the form of creating new products or processes (Covin & Miles, 1999; Schumpeter, 1934). Lumpkin and Dess (2001) define entrepreneurial innovation as “... creativity and experimentation in introducing new products/services, and novelty, technological leadership and
R&D in developing new processes” (p.431). With respect to corporate entrepreneurship, Covin and Miles (1999) argue that innovation is central without which the notion does not exist. Hence, to be entrepreneurial or exhibit an EO firms must exhibit behavioral actions that are exemplars of innovation irrespective the presence of other dimensions of entrepreneurial behavior.

**Proactiveness.** Being proactive implies behaviors that can be interpreted as taking the lead vis-a-vis competitors and perceived business opportunities. Covin and Slevin (1989) related proactiveness to aggressive action toward competitors when trying to gain or maintain competitive advantage. They compared this stance to that of a passive and reactive approach that might be taken by a more conservative firm. In a similar way Lumpkin and Dess (2001) articulated that proactiveness exhibits characteristics of leadership in the market place working to influence the task environment. Venkatraman (1989) defined proactiveness as opportunity seeking related or not to existing business activity, new product or brand introductions before competitors, and strategic discontinuance of operations in the face of declining markets. Entrepreneurs act ahead of non-entrepreneurs and entrepreneurial firms are similarly proactive.

Though there is significant agreement in the literature about the dimensions of EO—innovativeness, risk-taking, and proactiveness—there is some confusion about the nature of EO. From the descriptive and definitional work drawn upon since Miller’s (1983) seminal work in the area, the EO construct seems to be firmly rooted in behavioral action. However, Lumpkin and Dess (2001) introduce equivocation with respect to state or action in language used to articulate the dimensions of EO. Specifically, “Innovativeness refers to a willingness . . . Risk-Taking means a tendency . . . [and] Proactiveness is . . . perspective” (Lumpkin & Dess, 2001: 431). The
terms used in the descriptive cited above indicate a state of being reflective of the values of the organization. Yet “An EO refers to the processes, practices, and decision-making activities that lead to new entry” (Lumpkin & Dess, 1996: 136) seems to clearly articulate an action construct.

We adopt the notion that EO is a behavioral action construct in this paper. Miller’s (1983) seminal work on EO proposed that specific firm-level behaviors captured the essence of entrepreneurship within established firms. Extending and building on Miller’s work, Jeff Covin and Dennis Slevin (Covin & Slevin 1986; 1989; 1991) developed and refined a survey scale with which to measure a firm’s EO. The Covin and Slevin scale has been used by researchers to examine EO in the context of a varied set of firm-level objectives. A recurring theme is EO’s relationship to various dimensions of firm performance (Lee, Lee & Pennings 2001; Wiklund 1999; Zahra & Covin 1995). The expectation of a positive link between EO and performance derives primarily from the recognition that globalization, technological change, shortened product life-cycles and competitive dynamics have driven firms to be more creative and entrepreneurial in their approach to markets (Ireland & Hitt, 1999). Therefore, firms that undertake the actions represented by EO may be able to negotiate environmental dynamics more successfully which should yield higher levels of firm performance.

**Market Orientation**

Narver and Slater (1990) specify that MO is the ability of an organization to produce “the behaviors for the creation of superior value for buyers and, thus, superior performance for the business” (p.21). Further they articulate three behavioral elements with respect to MO: 1) customer orientation; 2) competitor orientation; and 3) inter-functional coordination.
**Customer Orientation.** The underlying premise to this dimension is that firms demonstrating MO have a depth of knowledge and understanding for their customers such that the firm can generate superior value for customers. As Narver and Slater state, “A seller must understand not only the cost and revenue dynamics of its immediate target buyer firms, but also the cost and revenue dynamics facing the buyers' buyers, from whose demand the demand in the immediate market is derived” (1990; p.21). Such knowledge and understanding down the value chain derives from organizational practices and behaviors that are deeply ingrained with the purpose of gathering and processing information continuously.

**Competitor Orientation.** Similar to the customer orientation dimension, competitor orientation is comprised of the behaviors related to gaining and acting on a complete understanding of current and future competitor’s long-term capabilities and strategic direction. Included is an understanding about how current and future competitors will or might be capable of satisfying their customer’s needs. Implied in this dimension is the need for actions designed and executed to create significant insight within the firm.

**Inter-functional Coordination.** This element is defined by Narver and Slater as “the coordinated utilization of company resources in creating superior value for target customers” (1990: p. 21). Perhaps the most complex element of the three behavioral elements of MO, coordination occurs at the level of the business organization and is a function of how well the functional areas of the business work together to create value for the firm’s downstream customers. Firms, large and small, are bundles of human, intellectual, and financial capital resources. How much value the firm creates is dependent upon the repertoire of skills and
knowhow with respect to how well the firm is able to coordinate its activities efficiently and effectively across the internal value chain of activities.

**Growth**

A fundamental dependent variable in strategic management research is some dimension of firm performance. Of particular importance to businesses may be the firm-growth dimension. Management often articulates the desirability of growth as an important organizational goal. Firm growth has been associated with the ability to better withstand environmental shocks (Hannan & Freeman, 1984) and is a core element underlying the resource-based view of the firm (Barney, 1991) where theorists propose that resource endowments are the crux of a firm’s ability to grow (Penrose, 1959). Thus, firm growth is an important dependent variable in the study of organizations.

Growth may be particularly desirable for small firms. What Stinchcombe (1965) termed a “liability of newness” Freeman, Carroll, and Hannan (1983) concluded was also comprised of a “liability of smallness.” Bruderl and Schussler (1990) propose and test the notion that it is not newness that is the liability but that it is a liability of adolescence supported by the logic that new business organizations possess a stock of resources that will sustain them through the startup phase and into the adolescent phase where the stock of resources may begin to run out. This notion is essentially an expansion of the liability of smallness notion in that the ability of a firm to sustain itself will cease if it cannot successfully generate the resource flows necessary. Hence small firms may need growth simply as a mechanism for survival.
Hypotheses

Given the globalization of markets, the pace of technological change (Ireland & Hitt 1999) and other exogenous environmental changes that inevitably challenge small firms, a coping mechanism is to gather information, analyze information and learn what decision avenues or opportunities may be open to them. The process of information gathering, analysis and gaining insight into dynamic conditions is organization learning (Fiol & Lyles, 1985). Therefore a key process in the successful strategic management for any firm may be its ability to learn. Learning may provide the means by which small firms successfully negotiate difficult environments and overcome liabilities of newness (Stinchcombe 1965), smallness (Freeman, et al. 1983), or adolescence (Bruderl & Schussler 1990).

Implicit in Narver and Slater’s (1990) content specification of MO is the notion of learning. In their discussion of customer orientation and competitor orientation is the idea of understanding. To understand complex and dynamic entities such as customers and competitors with respect to current and future needs and actions requires the firm to have a proclivity for information gathering, processing and interpretation—essentially a culture for learning. Firms that value learning are much more likely to enact the behaviors that comprise MO.

Similarly, entrepreneurship researchers propose that learning in various manifestations is an important element in the opportunity recognition process (e.g., Dutta & Crossan 2005; Lumpkin & Lichtenstein 2005) by entrepreneurs and entrepreneurial firms. Recognized opportunities provide options for strategic renewal or new product/new venture efforts (Lumpkin & Lichtenstein 2005), both of which may provide a firm the path to enhanced performance. The parallel between strategic management and entrepreneurship is the idea that opportunity provides
the avenue for a firm to grow and prosper. Firms with an orientation or the values present to
learn may be better able to successfully establish performance enhancement mechanisms (Baker
& Sinkula, 1999).

**Hypothesis 1:**  *Learning orientation is positively related to SME performance.*

To the extent that an EO allows SME firms to be more efficient in their activities, cater to
customer needs in superior ways, or be faster to market than competitors, firms may be able to
create competitive advantage and hence superior performance (Covin, et al., 2006). Given the
relative consistency in empirical support from other research studies that examine the
EO/performance relationship (e.g., Covin & Slevin, 1989; Wiklund & Shepard, 2003) we
anticipate a direct effects relationship between the EO construct and small firm growth.

**Hypothesis 2A:**  *Entrepreneurial Orientation is positively related to SME performance.*

The relationship between MO and performance has been the subject of much empirical
research in larger firms (Narver & Slater 1990), SMEs (Kara, Spillan, & DeShields 2005) and
Chinese SMEs (Li, Zhao, Tan & Liu 2008). The idea that firms with higher reported levels of
the MO construct demonstrate greater levels of performance is generally supported in the
literature. This outcome should not be surprising given that MO effectively measures how well
firm understands its customers, its competitors, and how well it coordinates its value creating
activities throughout the firm to (more effectively than competitors) meet its customers’ needs.

**Hypothesis 2B:**  *Market Orientation is positively related to SME performance.*

While there is logical and empirical support for the presence of a positive main-effects
relationship between both MO and EO with firm performance, there is also logical and empirical
support for a significant positive interaction effect between MO and EO on SME performance. As shown by Li, et al. (2008) in their study of transition economy SMEs there was a significant positive interaction effect between MO and two of the three dimensions of the EO construct (proactiveness and innovativeness). Interestingly the risk-taking dimension was positive but not significant. This outcome may be an artifact of the stage of development in the Chinese economy from which the sample was drawn (Li, et al. 2008). Irrespective of the outcomes reported by Li, et al., the notion that MO and EO may be complementary constructs that have a multiplier effect with respect to SME performance has logical and intuitive appeal and, thus, should be examined across a spectrum of SME conditions.

The complementary nature of MO and EO can be illustrated by the following discussion. The component dimensions of MO combine create within a firm the necessary knowledge to understand deeply customers, competitors, and how to effectively combine the internal organization to maximize value creation (Narver & Slater 1990). As previous research points out (Bhuian, Menguc & Bell 2005; Li, et al. 2009) this is a necessary condition for higher performance levels in firms but it may be insufficient for the highest levels of performance. Absent behaviors that provide a firm the capability to recognize opportunities and act on perceived opportunities performance improvement may be limited.

Conversely, past research has shown that the presence of EO in firms is positively related to performance (Covin & Slevin, 1989). However, while EO may signify that a firm has the knowledge base to recognize opportunities and the willingness to act on perceived opportunities, in the absence of a deep customer understanding, knowledge of their current and future needs and how to marshal organizational resources to satisfy needs, the full performance benefits from
EO may be attenuated. Hence, there is likely to be a mutually reinforcing positive relationship between MO and EO with respect to SME performance.

**Hypothesis 3:** Market Orientation and Entrepreneurial Orientation interact (moderate each other) such that higher levels of each yield a significantly positive relationship to SME performance.

To this point we have discussed the main effects relationship of LO, EO, and MO with performance and the interaction effects between EO and MO. In addition to these relationships there is a logical link that exists between the cultural values present in a firm, the actions taken by the firm and the resultant organizational outcomes realized by the firm. Specifically there is a relationship between LO (values), EO and MO (actions), and the performance (outcomes) of SMEs.

Learning is a process (Crossan, Lane and White, 1999). Knowledge, the desired result of the learning process, is that which facilitates innovation or the solution to problems (Nonaka, 1994). Crossan, Lane and White (1999) propose the 4I framework for organization learning—intuiting, interpreting, integrating and institutionalizing. The last two of these activity components can be argued to comprise the conversion of learning to knowledge. Integrating and institutionalization (the third and fourth I respectively) represent the transition from learning to organizational knowledge. Given these arguments we propose that the presence of a LO within the firm will yield more usable knowledge with which the firm can innovate or generate marketplace solutions to problems. However, LO represents a set of specific values that may guide the firm in what it does (Sinkula, et al., 1997).
Lumpkin and Dess (1996) state that “EO refers to the processes, practices and decision-making activities” exhibited by a firm (p. 136). Consistent with this reasoning is the argument that EO represents the actions that may be shaped by the values of the firm. An EO is an organization-wide predisposition to act in a way that reflects innovation, risk-taking, and pro-actions regarding how a firm operates (Lumpkin & Dess, 1996). A firm with an EO must learn to be able to innovate and act ahead of competitors. Therefore a firm’s LO is antecedent to an EO and may shape the actions that firms take. In other words there are indirect effects of the LO/performance relationship such that EO will mediate the effects of LO on the performance of the firm.

With respect to MO “[c]ustomer orientation and competitor orientation include all of the activities involved in acquiring information about the buyers and competitors in the target market and disseminating it throughout the business(es)” (Narver & Slater 1990: p. 21). Similar to the EO discussion above MO requires an organization-wide predisposition to act in a manner consistent with the elements that comprise the MO construct. Hence there is likely to be present in a firm that exhibits a strong MO the values that shape the culture or climate to acquire information, disseminate information, process information into knowledge, and use that knowledge to coordinate an organization-wide response to create value for customers. LO is antecedent to MO and shapes the actions taken by the firm to yield outcomes (performance) realized by the firm. Reinforcing these arguments is the premise that organizational values work through other factors (attitudes, climate, and task organization) to impact organizational performance (Marcouilides & Heck 1993).
**Hypothesis 4:** High levels of Market Orientation and high levels of Entrepreneurial Orientation will mediate the effects of Learning Orientation on SME performance.

Lastly we examine the differences between low and high performing SMEs. The constructs examined here and in previous research (e.g, Baker & Sinkula 1999; Covin & Slevin 1989; Narver & Slater 1990) are purported to be significant contributors to firm performance in many different contexts. According to Barney (1991) valuable, rare, hard to imitate, and non-substitutable resources are likely the source of competitive advantage. Each of the constructs examined in this research can be viewed as resources that meet the criteria for being the source of superior performance. Hence lower performing SMEs should exhibit lower levels of each of these resources than will high performing SMEs.

**Hypothesis 5:** There will be significant lower values for Learning Orientation, Entrepreneurial Orientation, and Market Orientation for low performing SMEs than are present in High Performing SMEs.

The hypotheses stated above are a specification of the relationships among the constructs we examine in this study. Figure 1 illustrates the proposed hypotheses that we have formulated in a path diagram that shows the dimensions of each construct and the various paths of influence the hypotheses represent.

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Insert Figure 1 about here
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METHODOLOGY

The study uses a survey method approach for data gathering to test the above proposed relationships. A sample of 700 randomly selected small- and medium-sized firms were identified from a mid-western state. The sample represented a broad cross-section of SMEs from a wide array of industries. A cover letter soliciting a response to an enclosed questionnaire was addressed to the owner, CEO or president from each firm in the sample. A total of 138 key-informants responded to the survey, while 117 provided complete information for a 17% response rate. The approach and response rate is consistent with similar studies that survey top management (Hambrick, Geletkanyecz, and Fredrickson, 1993).

Measurement

Performance. Small- and medium-sized private firms are often reluctant to provide specific information regarding performance. Because of the sensitive nature of the performance construct and following prior research (e.g. Chandler and Hanks 1994) in this area, we employed a categorical approach to assess firm performance. We asked respondents to answer three questions concerning their firm’s performance when compared to similar firms in their industry. Each item used a five-point Likert scale format ranging from 1 ‘lowest 20 percent’ to a 5 representing the ‘highest 20 percent’ which was used as a measure of relative performance levels. The questions asked respondents to compare their firm to the industry for growth in sales during the past three years, growth in assets over the last three years, and growth in number of employees during the last three years. This construct was labeled “growth” and deemed it a
valid measure because of the single factor loading from a confirmatory factor analysis and because of the high coefficient alpha ($\alpha = .82$).

**Entrepreneurial Orientation.** Entrepreneurial orientation was measured using a modified version from Covin and Slevin (1991) and based on prior works of Miller (1983) and Covin and Slevin (1989). The construct was measured by asking respondents twelve (12) questions relating to each dimension - proactiveness, innovativeness and risk-taking. Each dimension included four items. For example in the case of the innovativeness dimension, we asked respondents ‘compared to others in the industry our company emphasizes’: ‘being first to the market with innovative new products/services’; ‘developing new processes’; ‘recognizing and developing new markets’; and ‘being at the leading edge of technology.’ Each of the twelve items used a seven-point Lickert scale with 1 representing ‘strongly disagree’ to 7 representing ‘strongly agree’. A confirmatory factor analysis was utilized to establish the presence of the multidimensionality of the construct. As expected and similar to past research (e.g. Covin and Slevin 1991) three dimensions emerged from the analysis with an overall scale reliability of $\alpha = 0.86$. This construct was labeled EO “entrepreneurial orientation.”

**Learning Orientation.** Following previous research such as the work of Baker and Sinkula (1999), we measured learning orientation construct, we also examined the multidimensional of the constructs two dimensions, commitment to learning and open-mindedness. The respondents were asked the degree in which they either agreed or disagreed with eight questions relating to learning. For example ‘commitment to learning’ was composed of the following: ‘the ability to learn is the key to our competitive advantage’; ‘learning is a basic value throughout our organization’; ‘employee learning is viewed as investment, not an expense’; and ‘learning is seen as a necessity to guarantee the firm’s survival.’ A seven-point
Licker scale ranging from 1 – ‘strongly disagree’ to a 7 ‘strongly agree’ was used. As expected the results of a confirmatory factor analysis yielded two dimensions with an overall reliability of $\alpha = 0.93$. We labeled this construct LO “learning orientation.”

*Market Orientation.* Consistent with previous research, we selected the MARKOR scale developed by Kohli, Jaworski and Kumar (1993) to assess market orientation. Respondents indicated the extent of their disagreement or agreement, on a seven-point scale (“1 = strongly disagree” to “7 = strongly agree”), with each item reflecting market orientation. These items are consistent with previous research measuring a firm’s market orientation (Jaworski and Kohli 1993). The overall scale reliability was $\alpha = 0.87$, we labeled the construct “market orientation” or MO.

We measured firm size with an open-ended question asking the number of employees currently employed by the firm, the log of employees was used as a control variable in the study.

**RESULTS**

The means, standard deviations and correlations are reported in Table 1. Analysis of the data with respect to skewness and kurtosis in the dependent variables fall within the boundaries of normality (Shapiro & Wilk, 1965) and thus allow for parametric tests of significance. The hypotheses presented above were analyzed using both hierarchical regressions and ANOVA analyses.

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Insert Table 1 about here
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The results of the regression analyses are displayed in Tables 2. The table provides the results concerning the proposed positive relationships between LO, EO and MO to SME performance. The first regression model found strong support for LO and performance, supporting hypothesis 1. Hypothesis 2A suggested a significant relationship exists between EO and performance, while hypothesis 2B suggests that MO would explain performance. The result of the second regression (Model 2) supports 2A, however no support was found for hypothesis 2B. Finally, Model 3 examined if there is a positive interaction between EO and MO on performance. The direct effects for the relationship between EO are positive and significant in the previous model but once the interaction effect is entered into the analysis the direct effects of EO disappears, confirming hypothesis 3. The results support hypothesis 3.

Hypothesis four proposed that EO and MO may mediate the effects of LO on performance. The results of the regressions indicate that the strength of the LO to performance relationship were attenuated, though not eliminated, when EO and MO were included in the regression models. We interpret this result as support for hypothesis 4.

The final hypothesis suggested that there would be significant differences between low- and high-performing firms in relation to LO, EO and MO. The ANOVA results are reported in Table 3. The performance measure was split at the mean (3.63) resulting in 51 low performing and 68 high performing classified firms. ANOVA analysis was then completed on both performance groups and the independent constructs. The findings found significant differences
for each independent measure (LO, EO, and MO) and performance; we also found a significant
difference for the interaction term (EOxMO). Overall the findings support hypothesis 5.

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Insert Table 3 about here
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DISCUSSION AND CONCLUSION

The primary rationale for this research was to examine the relationship between an
organization’s learning orientation with the concept of market orientation and entrepreneurial
orientation in the context of high performing SMEs. Overall, the preliminary results of data
analysis for this study support the proposed relationships illustrated above. In addition, it is
argued that this study adds to the evidence that organization learning in SMEs is comprised of
significant cultural dimensions, embodied by learning orientation, and decision/action
dimensions embodied by market orientation and entrepreneurial orientation. Further, it is
demonstrated in this work and in other research (i.e., Baker & Sinkula 2009) that the dimensions
examined have a positive relationship to higher levels of performance in SMEs. The paper
begins to build the arguments that the complex notion of organizational learning in SMEs is
multidimensional in nature comprised of culture, organizational processes, and decision/action
predispositions. The findings of this study suggest that understanding the nature of learning
organizations may provide an understanding of high performing firms.
REFERENCES


Figure 1
Hypothesized Relationships between Learning, Entrepreneurial and Market Orientation to Performance
### Table 1
Descriptive statistics and correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance</td>
<td>3.63</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Log Employees</td>
<td>3.98</td>
<td>1.04</td>
<td>0.179</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Learning Orientation</td>
<td>5.74</td>
<td>0.97</td>
<td>0.262*</td>
<td></td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>4. Entrepreneurial Orientation (EO)</td>
<td>4.76</td>
<td>0.88</td>
<td>0.284**</td>
<td>0.154</td>
<td>0.515***</td>
<td></td>
</tr>
<tr>
<td>5. Market Orientation (MO)</td>
<td>5.49</td>
<td>0.75</td>
<td>0.234*</td>
<td>0.083</td>
<td>0.536***</td>
<td>0.517***</td>
</tr>
</tbody>
</table>

*p < 0.05; ** p < 0.01; *** p < 0.001
Table 2
Impact of LO, EO, and MO on Performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.799*</td>
<td>1.564*</td>
<td>5.982*</td>
</tr>
<tr>
<td>Log-Employees</td>
<td>0.144**</td>
<td>0.123*</td>
<td>0.116</td>
</tr>
<tr>
<td>Learning Orientation (LO)</td>
<td>0.218***</td>
<td>0.150*</td>
<td>0.184*</td>
</tr>
<tr>
<td>Entrepreneurial Orientation (EO)</td>
<td>0.175**</td>
<td>-0.083</td>
<td></td>
</tr>
<tr>
<td>Market Orientation</td>
<td>-0.023</td>
<td>-0.084</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Orientation x Market Orientation</td>
<td></td>
<td></td>
<td>0.357***</td>
</tr>
</tbody>
</table>

|                  |          |          |          |
| $R^2$            | .09      | .11      | .14      |
| Adjusted $R^2$   | .08      | .08      | .11      |
| Change in $R^2$  | .02      | .03*     |          |
| $F$-value        | 5.873**  | 3.683*   | 3.641**  |

* p < .10;  ** p < .05;  *** p < .01
Table 3
Comparison of LO, EO, MO and EO x MO Between High- and Low-Growth Small and Medium Sized Enterprises

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Performance</th>
<th>Mean</th>
<th>S.D.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LO Learning Orientation</strong></td>
<td>Low</td>
<td>5.24</td>
<td>1.06</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>5.91</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td><strong>EO Entrepreneurial Orientation</strong></td>
<td>Low</td>
<td>4.50</td>
<td>0.90</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.96</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td><strong>MO Market Orientation</strong></td>
<td>Low</td>
<td>5.36</td>
<td>0.82</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>5.61</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td><strong>EOxMO Entrepreneurial Orientation x Market Orientation</strong></td>
<td>Low</td>
<td>12.20</td>
<td>3.55</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>14.08</td>
<td>3.57</td>
<td></td>
</tr>
</tbody>
</table>
This session introduces delegates to various profiles of the Caribbean entrepreneur and/or small business owner. The first GEM results for Puerto Rico will be presented. A general population profile will be explored, based on the GEM results. Recent research on women entrepreneurs/small business owners and how they conduct business and work within networks to gain footing in business will be presented. We will feature profiles of groups of women and how they use different strategies to conduct business. One of the activities in which SME’s have a competitive advantage in the Caribbean is the added value operations. SME's supply services and goods to industries that operate around seaports and airports in the various transshipment ports in the Caribbean. The opportunities and impact of SME's in this field will be discussed.

Keywords: GEM Study; Women Entrepreneurs in Puerto Rico; SME’s supply chain; Transshipment ports and SME’s
The Effects of Figure’s Symbolic Meanings of Product and Consumption Values on Corporate Awareness and Brand Association _

The Taiwan market perspective

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As the degree of product differentiation is becoming less and less, many Asian SMB enterprises start with developing figure strategy to link to brand and extend competitive strategy outside of product itself. This study is to explore the effects of figure’s symbolic meanings and consumption values on corporate awareness and brand association in Taiwan. We use experimental design method and questionnaire to collect data and verify four hypotheses. We found that the figure's different symbolic meanings and consumption values has significant effect on the corporate awareness and brand association. Taiwan enterprises from OEM toward the brand, the researcher believe that the figure manipulation would be an effective strategy to strengthen brand management.

Keywords: symbolic meaning, consumption value, brand association
WORKSHOP: Building Successful Earned-Income Initiatives for Non-Profit Organizations

FORMAT: Discussion Leader, three (3) panelists, and active audience participation

ABSTRACT: Non-profit organizations have historically used earned-income initiatives to support their missions. These include a hugely broad array of strategies from licensing to retail sales to strategic partnerships. The discussion leader for this proposed workshop is the author of a new book, *Bankable Business Plans for Non-Profits*, which reviews the options and details the process of creating and building such earned-income initiatives. The workshop panel will include Executive Directors of non-profits from the Cincinnati area who will discuss their own experiences in creating and managing such business ventures within their non-profits. In addition, active audience participation will be part of sharing ideas, experiences, and issues related to this process.

WORKSHOP ORGANIZATION: The discussion leader will provide a 15 minute overview of the issue. Each panelist will review his or her experience related to this topic in 10 minutes. A 30 minute discussion will follow.

INTENDED AUDIENCE: Faculty who teach Management of Non-Profit Organizations, Entrepreneurship courses that includes sections on non-profits, Social Entrepreneurship, managers of non-profit organizations, policy makers, and researchers whose areas include Non-Profit Management and Social Entrepreneurship.

PRESENTERS:

**Discussion Leader:** Edward G. Rogoff is the Lawrence N. Field Professor of Entrepreneurship in the Department of Management of the Zicklin School of Business at Baruch College, The City University of New York. He is also Chair of the Department of Management. He also teaches at the Columbia Business School and received a B.A., M.B.A., M.A. and Ph.D. from Columbia University where he wrote his thesis under the supervision of Nobel Laureate William Vickrey. Dr. Rogoff has served as the Academic Director of the Lawrence N. Field Center for Entrepreneurship at Baruch College, teaches, and conducts research in entrepreneurship, particularly relative to minority and later-life issues. Dr. Rogoff has been named the 2010 Outstanding Entrepreneurship Educator of the Year by the United States Association of Small Business and Entrepreneurship. He is the author of *Bankable Business Plans* and co-author of *The Entrepreneurial Conversation*. His most recent book is *The Second Chance Revolution: Working for Yourself after 50*, co-authored with David Carroll. He has published in such journals as *The Journal of Business and Entrepreneurship, The Journal of Developmental Entrepreneurship, Family Business Review, and Journal of Small Business Management*. Dr. Rogoff was a 2003 Guest Co-Editor of the *Journal of Business Venturing*. In 2007, he is Guest Co-Editor of the *Journal of Developmental Entrepreneurship*. He has written articles for the *New York Times, Forbes, and Newsday*, as well as having been a guest on CNN. He has trained and worked with hundreds of entrepreneurs in many industries.

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Panelists: Executive Directors of Non-Profit organizations from the Cincinnati area.
Designing an Entrepreneurship Education Program within a Four-Phase Venture Creation Process Framework

Abstract

Introduction

For years, entrepreneurship educators have been asked: Can you really “teach” entrepreneurship? If so, what exactly do you teach? This is a challenging question. A search for the answer has spawned entrepreneurship research that attempts to define the “work” of the entrepreneur (i.e. entrepreneurial activities) and then identify the skills needed to be successful at undertaking these entrepreneurial activities. The assumption is that once these skills are identified, they can be developed through participation in properly designed entrepreneurship training and education programs.

Entrepreneurial Self Efficacy (ESE)

Entrepreneurial self-efficacy (ESE) has long been studied as an important antecedent to entrepreneurial intentions (Barbosa, Gerhardt, Kickul, 2007; Boyd & Vozikis, 1994; Zhao, Seibert, & Hills, 2005). ESE is a construct that measures a person’s belief in their ability to undertake entrepreneurial activities and successfully launch a venture and is considered a strong predictor of entrepreneurial intentions and ultimately action (Bird, 1988; Boyd & Vozikis, 1994). In fact, some researchers have argued that an individual’s ESE may be elevated through training and education; thus potentially improving the rate of entrepreneurial activities (Florin, Karri, & Rossiter, 2007; Mueller & Goic, 2003; Zhao, Seibert & Hills, 2005).

Entrepreneurial Tasks and the Venture Creation Process

The process of starting a business involves very distinct activities unique to the new venture creation process. These activities, although somewhat management-related, should not be confused with general management tasks. A useful model for describing entrepreneurial tasks is a
process model first proposed by Stevenson (in Stevenson, Roberts, and Grousbeck, 1985) and adapted by Mueller and Goic (2003). Entrepreneurial activities are separated into four discrete steps or phases referred to as (1) searching, (2) planning, (3) marshaling, and (4) implementing.

The first step *searching* involves the development by the entrepreneur of a unique idea and/or identification of a special opportunity. The second step *planning* consists of activities by which the entrepreneur converts the idea into a feasible business plan. The third step *marshaling* involves assembling resources to bring the venture into existence. The final step is *implementing*. During this phase, the entrepreneur engages in strategic planning and manages a variety of business relationships with suppliers, customers, employees, and providers of capital.

Mueller and Goic (2003) found significant variation in the level of ESE from individual to individual and across the four phases of the venture creation processes supporting the argument that ESE is multi-dimensional. Some individuals, for example, exhibited high ESE for performing tasks associated with the searching phase while exhibiting low ESE for performing tasks associated with the marshaling phase.

**The Education Intervention**

Because self-efficacy is malleable, a number of entrepreneurship researchers and scholars have proposed and tested the use of an education (or training) “intervention” to raise an individual’s level of ESE (Cox, Mueller, & Moss, 2002; Florin, Karri, & Rossiter, 2007; Wilson, Kickul, & Marlino, 2007). For example, Cox, Mueller, and Moss (2002) measured change in ESE before and after the completion of an undergraduate course in entrepreneurship to determine course effectiveness. Wilson, Kickul, and Marlino (2007) noted that a well designed entrepreneurship [education] program should give the student a realistic sense of what it takes to start a business as well as raising the student’s self-confidence level (ESE).
Program Design

Designing an entrepreneurship education program based on a four-phase venture creation model has certain advantages. Matching each phase to a specific course in sequence provides a overarching structure for the curriculum and a logical flow in topics from business conception to launch. A sample design is presented.

References


The objectives of the study are to investigate barriers encountered by Thai small and medium-sized enterprises (SMEs) and to examine the perception on the supporting role of government towards SME sector in Thailand. A sample of 174 SMEs in Thailand was used to empirically examine the objectives of the study. The key barriers identified in the research included factors linked to institutional, internal organization, external, financial and other barriers. Empirical data were collected through survey questionnaires, and semi-structured interview. The findings reveal that external barriers were reported to be of major importance to SMEs performances. In contrast, in this study institutional barriers were seen as less serious than the other types of barriers. Thai SMEs found that government support programs are useful but inadequate. The findings suggest that Thai government should take into account difference in individual firm characteristics when offering those supports and should provide opportunity to SMEs to express their views regarding SME policy and development.

Introduction

It is widely accepted that the SME sector plays a key role in economic development. The main areas in which the sector contributes are in job creation, innovation and the creation of competition (Storey, 1994; Carter and Jones-Evans, 2006). For developing countries in particular, SMEs play an increasing role in industrial structures. The SME sector accounts for more than 90 percent of all firms outside the agricultural sector of East and South-East Asia and contributed between 40 to 85 per cent of the total employment in regional economies (Wattanapruttipaisan, 2002).

For Thailand, SMEs are vital to the Thai economy. Formal and informal SMEs together employ around two third of total enterprises’ employment. In addition, they account for a large proportion of the total establishments and engage across a broad range of economic
activities. Within the Thai economy, SMEs also have important roles in increasing in value added, supporting industrial development, utilizing indigenous raw materials, and linking large and small industries. SMEs therefore represent a particularly attractive candidate for future national economic growth. With the great contributions of SME sector to the Thai economy, appropriate government policies, strategies, and assistance programs are important for the sustainable development of SME sector in Thailand.

Despite their importance in the Thai economy, Thai SMEs still encounter with several obstacles in their operations. When considered about the barriers facing SMEs, a number of managerial aspects such as finance, marketing, and human resource were stated by SMEs. Training, technology, infrastructure, government policy and regulations were also seen as the main problems facing them. Recent study involving SME sector in Thailand (OSMEP, 2008) highlighted various common limitations of SME operations: lack of management capabilities, limited access to market information and promotional services by government agencies, shortage of capital, inadequate skilled labor, and uncertainties in support programs. To remove those barriers faced by SMEs, Thai government introduced a range of information, grants, training and assistance through various government agencies.

However, it is likely that many SMEs fail to take advantage on the assistance mentioned above. Only formal and larger enterprises could take advantage of the policy and supports, hence the smaller enterprises still cannot satisfactorily access these supports (White, 1999). In addition, it appears that little is known about the effectiveness of SME support programs.

This research therefore responds to the need for empirical analysis of the barriers facing SMEs and the perception on the role of government on supporting SMEs development. This study aims to provide policymakers with in depth information needed for designing effective policies and support programs in favor of the SME sector. Based on the findings and results of the study, conclusions and policy implications are drawn.
**Barriers Encountered Small Firms**

A crucial question for, economists, policy makers, and business owners and managers alike is why businesses do well or fail. Numerous studies have focused on measures of success and failure of small businesses (Ali et al., 2001; Gardenne, 1998; Lin, 1998). Several of these studies have attempted to indicate the factors responsible for business success, while others have addressed the issue from the point of view of business failure. One way of explaining why so many businesses are not successful is through the notion of barriers.

The importance of the barriers encountered by small firms has been highlighted in a previous report by the Federation of Small businesses (FSB, 2000). Barriers have been used to account for why so few businesses grow and why the SME sector does not survive. However, SMEs in different sectors may encounter different environment, problems, and therefore barriers. Attempts to support the development of SME sector by eliminating barriers should be based on knowledge, and understanding of these barriers facing SMEs. Barriers encountered by SMEs include both internal and external environments (Barber et al., 1989; Mullins, 1993; Smallbone et al., 1993; Jones-Evans, 1996; Fielde et.al, 2000). It has been found, for example, that economic fluctuations strongly affect the growth probability of small firms (Kangasharju, 2000). Institutional factors such as government policy, bureaucracy, limited infrastructure and entrepreneurial activities can have a profound influence on firms’ economic performance (O’Neill and Duker, 1986). Complicated laws, rules and regulations concerning businesses can be tough on small firms. This suggests that the promotional role of government assumes special significance for SME development (Khader and Gupta, 2002). The most common barriers relating to factors on difficulties in
obtaining finance and the level of and decrease in demand are also mentioned in a number of previous studies (McMahon and Holmes, 1991, Storey and Westhead, 1997; Gorton, 1999; Perren, 2000). Other barriers were caused by problems in obtaining a skilled workforce, access to raw materials, difficulties in exporting, and inability of owners and managers to control business functions (Storey, 1994; Bartlett and Bukvic, 2001). The internal factors include weak managerial or marketing skills, poor business planning, resource shortages and capacity limitations, human resource management are also encountered by small firms (Weinrauch et al., 1991; Bartlett and Bukvic, 2001; Kraus et al., 2006).

For Thailand, the overall views of problems facing Thai SMEs are not different from those of other developing countries. According to the report of Department of Industrial Promotion of Thailand (DIP) (1994), what small firms complained the most were the problem of insufficient capital or lack of financial sources, labor shortages, and limited access to market. Similarly, the National Statistic Office (NSO) (1999) survey also revealed that the marketing and financial problems were top of the list of problem and barriers faced by Thai SMEs. The study carried out by the Office of Small and Medium Enterprises Promotion (OSMEP) in year 2002 also reported that the main obstacles of SMEs were related to lack of access to skill development and training of employees, managerial capabilities of owners and managers, and administration system of the government.

**Public Policies toward SMEs in Thailand**

Owing to the growing importance of SMEs as an economic and political force, appropriate policy formulation is needed. In Thailand, “dual track” policy has been used to recover and at the same time promote growth and development of the Thai economy. This policy has been seen as bringing about some promising changes in the development of the Thai SME sector.
Several SME development-related measures have been introduced along with financial support schemes. Some of the popular supportive financial measures included the village funds “the People’s Bank” and “One Tambon One Product” (OTOP). The OTOP project aims to support grassroots communities to use their local knowledge to develop their own products with some technical support from government agencies. At the same time, OSMEP was set up as a coordinating body among government agencies for SME development. The OSMEP takes responsibilities to formulate SME promotional policies and strategies as well as serves as a central organization in coordinating with both government and private agencies to promote Thai SMEs. Following are the main responsibilities of the OSMEP (OSMEP, 2001):

- Formulating a SME promotion master plan and promotional policies.
- Preparing an action plan for the promotion of regional/sectoral SMEs as well as micro and community enterprises.
- Serving as the country’s SME information center and the central organization for the conduct of research and studies on SME-related issues.
- Developing information systems and networks to support the operation of SMEs.
- Administering the Venture Capital (VC) Fund for SMEs.

For, the first promotion plan (2002-2006), the emphasis was put on public support design to remove both internal and external barriers to the firm. The supports thus include programs to help SMEs develop internal capabilities as well as financial and marketing assistance. They also provide counseling on various areas of managerial practices. The ideology behind the plan is based upon the hypothesis that SME development can be promoted by the activities of local institutions and development coalitions among SME related development agencies- OSMEP, ISMED, SME bank, local governments, chambers of commerce, business associations, local commercial banks, colleges and universities, and
networks of firms. Practically, the first SME promotion policy has three main streams that are investment promotion, financial assistance, and technical and management consultancy. The SME Promotion Act and SME Development Bank of Thailand were also established with the role of assisting SMEs in securing sources of funds, preparing business plans and providing advice on business operations.

With the moderate success of the first plan, the second SME promotion plan (2007-2011) was established in 2006. The plan aims to enable SMEs to grow with continuity, strength, and sustainability in terms of knowledge and skills. Of the numerous measures employed in this plan, those related to various sectors include product quality improvement, establishing business incubator centers in regional and local areas, trade fairs, setting up of exhibition centers for SME products throughout the country, and creation of industrial networks.

Methodology

Questionnaire and Sample

This study employs both qualitative and quantitative approaches. The reason for using both approaches is simply that qualitative research paradigm may improve the understanding of firm barriers where the quantitative survey method might failed to explain “how” and “why” questions. Data for the study were collected from various sources in Thailand in 2008. Primary data were collected through fieldwork includes questionnaires, and semi-structured interviews. Two questionnaires were constructed in accordance to the objectives of the study. The items used to measure the variables in the present research were identified and selected from literature. Two sets of questionnaires were constructed: one for SME respondents and
the other for related agencies. The first set of questionnaires was mailed to SMEs and delivered in person to owner/manager respondents during the actual interview.

In this research, barriers encountered by SMEs that were included in the first set of questionnaires were separated into five groups that are institutional, internal organizational, external, financial, and other barriers. Institutional barriers include government bureaucracy, lack of support services, and poor government policies and regulations. Internal organizational barriers include business planning, managerial capacity and capability, skilled labors shortage, high labor cost, lack of technology for better production, and performing human resource management (HRM) techniques. Barriers due to the external constraints consist of high tax, access raw materials, lack of market demand, power supply and infrastructures, and changes in customer behavior. Financial barriers include availability and cost of loans, high collateral requirements, and high overall operating expenses. Finally, economic fluctuations, crime, population trends, and globalization are categorized in other barriers.

The second set of questionnaires was designed to assess issues related to the role of government in SME development. This set of questionnaires was used to interview those who work with the agencies directly involved in SME development such as commercial banks, university, and city council. A pre-test and pilot study of the survey instrument was conducted before the full-scale study was dispatched. The questionnaires were in Thai. Follow-up letters were sent after three weeks. Then, the empirical data was consolidated in a database for statistical analysis and coded and analyzed by using statistical software programs, SPSS. Interviews with SME owners/managers were conducted after the completion of questionnaire survey.

The first set of questionnaires was sent to 1,000 SMEs that registered with the Institute for SME Development (ISMED) in Thailand. A total 174 usable questionnaire were
returned, providing the response rate of 17.4 percent. All responding firms were still in operation. The second set of questionnaires was completed by 32 respondents of both public and private agencies.

**Results**

The data were processed and analyzed using descriptive and univariate statistics (means and frequencies) to provide a better understanding of the respondents and characteristics of the data. Characteristics of the firms in the sample are shown in Table 1. The respondent firms strongly support the information provided by the Office of Small and Medium-sized Enterprises Promotion (OSMEP) in year 2008 that the majority of SMEs in Thailand are in trade sector.

A great proportion of firms or 82.2 percent were small sizes whereas much smaller proportion or 17.8 percent of the firms in this sample were medium sizes. Moreover, the result of this study shows nearly half or 48.9 percent of the firms have been established in business for 6-10 years. About one third or 29.3 percent of the firms have been in business for 11-20 years, while 17.2 percent and only 4.6 percent have been in business more than 20 years and between 1-5 years, respectively. The majority of the firms base in urban centers (66.7 percent) while 33.3 percent of sampled firms base in rural area. Approximately 62.1 percent of firms in the sample were local market-based whereas only 12.1 percent were international market-based and 25.9 percent were both local and international markets-based. As expected, the sampled firms were dominated by sole proprietorship (65.5 percent), followed by limited liability company (17.8 percent), partnership (12.1 percent), and co-operative (4.6 percent).
An understanding of the barriers encountered by SMEs is of practical importance for those involved in SME development. For SMEs owners/managers, the perception of a situation as those barriers can influence their business performances (Walsh, 1988). For policymakers, understanding SMEs’ situations will help in formulating appropriate policies and developing SMEs assistance programs (Huang and Brown, 1999). List of common barriers faced by SMEs were included in the questionnaire. The barriers were placed in five groups covering institutional, internal organization, barriers external to the firm, finance, and other barriers. Altogether, 22 potential barriers were identified and included in the questionnaire. The respondents were asked to indicate the severity of a number of barriers to their firm performance from 1 to 5. Table 2 presents key findings of the survey on the five groups of barriers which the sample firms faced. To supplement the questionnaire

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Survey Sample N</th>
<th>%</th>
<th>Ownership</th>
<th>Survey Sample N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing sector</td>
<td>61</td>
<td>35.1</td>
<td>Sole Proprietorship</td>
<td>114</td>
<td>65.5</td>
</tr>
<tr>
<td>Service sector</td>
<td>42</td>
<td>24.1</td>
<td>Partnership</td>
<td>21</td>
<td>12.1</td>
</tr>
<tr>
<td>Retail sector</td>
<td>56</td>
<td>32.2</td>
<td>Limited Liability</td>
<td>31</td>
<td>17.8</td>
</tr>
<tr>
<td>Wholesale sector</td>
<td>15</td>
<td>8.6</td>
<td>Co-operative association</td>
<td>8</td>
<td>4.6</td>
</tr>
<tr>
<td>Total</td>
<td>174</td>
<td>100</td>
<td>Total</td>
<td>174</td>
<td>100</td>
</tr>
<tr>
<td>Size of Firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small-sized</td>
<td>143</td>
<td>82.2</td>
<td>Urban area</td>
<td>116</td>
<td>66.7</td>
</tr>
<tr>
<td>Medium-sized</td>
<td>31</td>
<td>17.8</td>
<td>Rural area</td>
<td>58</td>
<td>33.3</td>
</tr>
<tr>
<td>Total</td>
<td>174</td>
<td>100</td>
<td>Total</td>
<td>174</td>
<td>100</td>
</tr>
<tr>
<td>Age of Firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>30</td>
<td>17.2</td>
<td>Local</td>
<td>108</td>
<td>62.1</td>
</tr>
<tr>
<td>6-10 years</td>
<td>85</td>
<td>48.9</td>
<td>International</td>
<td>21</td>
<td>12.1</td>
</tr>
<tr>
<td>11-20 years</td>
<td>51</td>
<td>29.3</td>
<td>Both</td>
<td>45</td>
<td>25.9</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>8</td>
<td>4.6</td>
<td>Total</td>
<td>174</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>174</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
findings, and to avoid reliance on self-reported data, interviews were conducted with three firms representing three sectors of manufacturing, retail, and service.

### Table 2
**Various Barriers Encountered by Thai SMEs**

<table>
<thead>
<tr>
<th>Groups of Barriers</th>
<th>Items</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional</td>
<td>Government bureaucracy</td>
<td>2.13</td>
<td>1.142</td>
</tr>
<tr>
<td></td>
<td>Poor government policies and regulations</td>
<td>3.02</td>
<td>0.765</td>
</tr>
<tr>
<td></td>
<td>Corruption of government officials</td>
<td>2.09</td>
<td>1.142</td>
</tr>
<tr>
<td>Internal</td>
<td>Poor business planning</td>
<td>2.26</td>
<td>0.896</td>
</tr>
<tr>
<td></td>
<td>Skilled labors shortage</td>
<td>2.64</td>
<td>0.988</td>
</tr>
<tr>
<td></td>
<td>Lack of ability to manage the business</td>
<td>2.53</td>
<td>1.155</td>
</tr>
<tr>
<td></td>
<td>High labor cost</td>
<td>2.85</td>
<td>0.881</td>
</tr>
<tr>
<td></td>
<td>Lack of technology for better production</td>
<td>2.66</td>
<td>0.943</td>
</tr>
<tr>
<td></td>
<td>Performing HRM Techniques</td>
<td>2.25</td>
<td>0.965</td>
</tr>
<tr>
<td>External</td>
<td>High tax</td>
<td>2.88</td>
<td>0.976</td>
</tr>
<tr>
<td></td>
<td>Access raw materials</td>
<td>2.41</td>
<td>1.085</td>
</tr>
<tr>
<td></td>
<td>Lack of market demand</td>
<td>3.65</td>
<td>0.951</td>
</tr>
<tr>
<td></td>
<td>Power supply and Infrastructures</td>
<td>2.40</td>
<td>0.922</td>
</tr>
<tr>
<td></td>
<td>Changes in customer behavior</td>
<td>3.15</td>
<td>1.120</td>
</tr>
<tr>
<td>Financial</td>
<td>Cost of loans</td>
<td>2.54</td>
<td>1.032</td>
</tr>
<tr>
<td></td>
<td>Lack of access to capital</td>
<td>3.24</td>
<td>1.164</td>
</tr>
<tr>
<td></td>
<td>High collateral requirements</td>
<td>3.05</td>
<td>0.875</td>
</tr>
<tr>
<td></td>
<td>High overall operating expenses</td>
<td>3.10</td>
<td>0.977</td>
</tr>
<tr>
<td>Others</td>
<td>Crime</td>
<td>2.19</td>
<td>0.846</td>
</tr>
<tr>
<td></td>
<td>Economic fluctuations</td>
<td>3.42</td>
<td>0.947</td>
</tr>
<tr>
<td></td>
<td>Population trends</td>
<td>2.15</td>
<td>0.904</td>
</tr>
<tr>
<td></td>
<td>Globalization</td>
<td>2.37</td>
<td>0.886</td>
</tr>
</tbody>
</table>

Scale: 1 = not important to 5 = very important

Among the institutional barriers, the general problem of poor government policies and regulations was ranked as the most important obstacle to business performance, with mean score of 3.02. Among internal barriers, the problem of high labor costs was clearly seen as the most important barrier with mean score of 2.85. Among external barriers, lack of market demand was ranked the most important with mean score of 3.65. Among financial barriers, lack of access to capital was ranked the most serious barriers, with mean score of 3.24.
Finally, among other barriers, an economic fluctuation was seen as the most serious, with score mean of 3.42. Clearly, overall institutional barriers are seen as less serious than the other types of barriers. This is consistent with Liedholm and Mead’s (1999) survey of entrepreneurs in five African countries which found that government regulations were reported to be of minor importance to firm performances. However, the results of this study may reflect success on the part of the Thai government efforts to reduce barriers by setting up a number of agencies dealing with SMEs and programs to support the SME sector.

Table 3
Top Five Barriers to Firm Performance

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of market demand</td>
<td>3.65</td>
</tr>
<tr>
<td>Economic fluctuations</td>
<td>3.42</td>
</tr>
<tr>
<td>Lack of access to capital</td>
<td>3.24</td>
</tr>
<tr>
<td>Changes in customer behavior</td>
<td>3.15</td>
</tr>
<tr>
<td>High overall operating expenses</td>
<td>3.10</td>
</tr>
</tbody>
</table>

Scale: 1 = not important to 5 = very important

Table 3 presents the top five perceived problematic barriers to firm performances among SMEs covered in the sample, ranked by the incidence of very high barriers. Of these, two were from the group of external barriers, one, from the group of other barriers, and two were financial barriers. It is interesting to find that an economic fluctuation which falls in the other category was regarded the second most important barrier to firm performance among the firms in the sample. This finding is consistent with Thee (2000). Thee (2000)’s study showed that economic crisis did have an adverse impact on small firms. This can also be noticed from interviews with SME owners/managers “I reckon that the fluctuation of national economy is the main factor that affects my business performances. This is because the profits and sales volumes dropped due to decrease in purchasing power of consumers, particularly as my business supplies to the domestic market.”
With regard to financial problems, small firms generally report more on financial problems. It is not surprising to find that the results of this study are consistent with those of previous studies (Wattanapruttipaisan, 2003; Tambunan, 2008) which found that financial constraints like lack of access to capital, and high collateral requirements are encountered by SMEs. This suggests that the attempts of government to alleviate SMEs’ financial problems by setting up several specialized financial institutions to help SMEs may not be effective enough.

As among the institutional barriers, poor government policies and regulations were ranked as the most important barriers to business performance. This may be interpreted that most SMEs believe that government’s role in supporting SME sector is crucial. This finding is consistent with the study of OSMEP (2002) which earlier found that lack of appropriate, systematical, clear, and coordinated planning and management in government in SMEs promotion is one of the barriers to SME development.
Table 4
Government Assistance Needed by Thai SMEs

<table>
<thead>
<tr>
<th>Types of Support</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Financial</td>
<td>27</td>
<td>29.03</td>
</tr>
<tr>
<td>2. Marketing</td>
<td>35</td>
<td>37.63</td>
</tr>
<tr>
<td>3. Operations</td>
<td>7</td>
<td>7.53</td>
</tr>
<tr>
<td>4. Business planning</td>
<td>12</td>
<td>12.90</td>
</tr>
<tr>
<td>5. Human resource</td>
<td>12</td>
<td>12.90</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Service</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Source of funding, database of financial providers</td>
<td>21</td>
<td>38.89</td>
</tr>
<tr>
<td>2. Training courses, SMEs seminars</td>
<td>14</td>
<td>25.93</td>
</tr>
<tr>
<td>3. Access to skilled workers</td>
<td>7</td>
<td>12.96</td>
</tr>
<tr>
<td>4. Access to market</td>
<td>12</td>
<td>22.22</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultancy Service</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Finance</td>
<td>23</td>
<td>31.94</td>
</tr>
<tr>
<td>2. Marketing</td>
<td>19</td>
<td>26.39</td>
</tr>
<tr>
<td>3. Business plan</td>
<td>14</td>
<td>19.44</td>
</tr>
<tr>
<td>4. Operations</td>
<td>6</td>
<td>8.33</td>
</tr>
<tr>
<td>5. Human resource</td>
<td>10</td>
<td>13.89</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>100.00</td>
</tr>
</tbody>
</table>

For the past 20 years, various kinds of assistance programs have been offered to SMEs by the Thai government. To investigate what are the assistances that SMEs actually needed, three areas of activities were listed and proposed in the questionnaire. Table 4 shows the results of assistance needed by Thai SMEs.

As shown in Table 4, Thai SMEs need greater assistance on various managerial areas in comparison to consultancy and information services. Among the support needs, assistance on marketing was needed the most. This is consistent with the results presented in Table 3 that the most needed assistance and support from government was in marketing area. In
addition, firms in the sample identified marketing barrier as the most important factor affecting their performances as can be seen from the list of problematic barriers to firm performances. This area of support is particularly important for smaller firms that cannot find their niche in the domestic or export markets.

As may be expected, the need to improve financial opportunities for SMEs is one of the priorities identified in the SME policy document. As can be seen from Table 5, financial consultancy was reported as high priority for Thai SMEs. This is to believe that advice or assistance from government in financial area appears to be crucial for SMEs in order to operate business efficiently.

With regard to information services, the results of the study reveal that they were least needed. This may be explained by the fact that it has been realized among SMEs that the Thai government has established a number of information services for SMEs under ISMED. These information services cover various aspects concerning SME development and promotion. For instance, ISMED offers “Buyer-Seller Business Matching” service which aims to help SMEs to get access to market by advertising their products and services in the ISMED’s website.

SME owners/managers were also asked to identify the various types of business assistance they had used. The following Table 5 shows types of assistance which have been used by SME owners/managers. Not surprising, the results of the study also show that marketing and financial assistances were used most frequently by SMEs.

When respondents were asked about the type of assistance they used to overcome difficulties and supported their business, marketing and financial assistances were reported with high level of use than technology and operations, development of personnel and HR, and information services. A possible reason why financial and marketing assistances were the most used was given by one of SMEs respondent during the interview that “I am
using both financial and marketing supports from government agencies. I apply for a loan from SME bank to start up my business, and use it for operation expenses. I also a member of local SMEs organization which helps me gain access to market for my products”.

An understanding of the usefulness of government support will also help policymakers to find suitable measures to support or assist SMEs. Hence, there is a need to identify whether those government supports work well as far as small firms are concerned. To obtain as complete a picture as possible, and to acquire comprehensive results on the usefulness of government assistance, the respondents were asked to rate the perceived usefulness of assistances that are provided by government or related public agencies. The results are shown in Table 6.

<table>
<thead>
<tr>
<th>Types of Assistance</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>25</td>
</tr>
<tr>
<td>Marketing</td>
<td>39</td>
</tr>
<tr>
<td>Development of Personnel and HR</td>
<td>7</td>
</tr>
<tr>
<td>Technology and Operations</td>
<td>16</td>
</tr>
<tr>
<td>Information Services</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

**Table 5**

Types of Assistance Used by Thai SMEs

**Figure 1**

Types of Assistance Used by Thai SMEs
### Table 6
Usefulness of Government Assistances
\( (n = 72) \)

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Standard</th>
<th>Strongly Disagree (N) (%)</th>
<th>Disagree (N) (%)</th>
<th>Undecided (N) (%)</th>
<th>Agree (N) (%)</th>
<th>Strongly Agree (N) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>3.33</td>
<td>1.055</td>
<td>6  8.30</td>
<td>14  19.4</td>
<td>15  20.8</td>
<td>24  33.3</td>
<td>13  18.1</td>
</tr>
<tr>
<td>P2</td>
<td>2.47</td>
<td>1.203</td>
<td>10 13.9</td>
<td>30  41.7</td>
<td>22  30.6</td>
<td>8  11.1</td>
<td>2  2.80</td>
</tr>
<tr>
<td>P3</td>
<td>2.88</td>
<td>0.965</td>
<td>2  2.80</td>
<td>32  44.4</td>
<td>20  27.8</td>
<td>9  12.5</td>
<td>9  12.5</td>
</tr>
<tr>
<td>P4</td>
<td>2.38</td>
<td>1.012</td>
<td>13 18.1</td>
<td>28  38.9</td>
<td>24  33.3</td>
<td>5  6.90</td>
<td>2  2.80</td>
</tr>
<tr>
<td>P5</td>
<td>3.49</td>
<td>1.007</td>
<td>3  4.20</td>
<td>15  20.8</td>
<td>13  18.1</td>
<td>26  36.1</td>
<td>15  20.8</td>
</tr>
<tr>
<td>P6</td>
<td>3.20</td>
<td>1.114</td>
<td>2  2.80</td>
<td>25  34.7</td>
<td>15  20.8</td>
<td>17  23.6</td>
<td>13  18.1</td>
</tr>
<tr>
<td>P7</td>
<td>3.39</td>
<td>0.870</td>
<td>5  6.90</td>
<td>18  25.0</td>
<td>10  13.9</td>
<td>22  30.6</td>
<td>17  23.6</td>
</tr>
<tr>
<td>P8</td>
<td>2.54</td>
<td>1.109</td>
<td>10 13.9</td>
<td>28  38.9</td>
<td>24  33.3</td>
<td>5  6.90</td>
<td>5  6.90</td>
</tr>
<tr>
<td>P9</td>
<td>3.48</td>
<td>0.982</td>
<td>4  5.60</td>
<td>12  16.7</td>
<td>15  20.8</td>
<td>27  37.5</td>
<td>14  19.4</td>
</tr>
<tr>
<td>P10</td>
<td>2.76</td>
<td>0.866</td>
<td>5  6.90</td>
<td>21  29.2</td>
<td>37  51.4</td>
<td>4  5.60</td>
<td>5  6.90</td>
</tr>
<tr>
<td>P11</td>
<td>2.76</td>
<td>0.978</td>
<td>6  8.30</td>
<td>22  30.6</td>
<td>33  45.8</td>
<td>5  6.90</td>
<td>6  8.30</td>
</tr>
</tbody>
</table>

where:

- **P1**: The assistance provided by government is useful
- **P2**: The assistance that the business received is adequate
- **P3**: The assistance that the business received is efficient
- **P4**: It is easy to apply for assistance from government
- **P5**: Receiving the assistance from government improves the business performances
- **P6**: Receiving the assistance from government helps to decrease the business problems
- **P7**: Business always face the problems when trying to ask for assistance from government
- **P8**: Business has to pay a lot of money to receive the assistance from government
- **P9**: The assistance from government should be targeted to specific needs of SMEs
- **P10**: The needs of the business was analyzed before it receive the assistance
- **P11**: The SME support agencies in Thailand are very familiar with the problem facing SMEs

The results from Table 6 reveal that as much as 51.4 percent of SME respondents believe that the government supports are useful for their business and 56.9 percent believe that obtaining assistance from government helps improve their business performance outcomes. Conversely, a total of 55.6 percent of SME respondents disagreed that various assistances offered by government are adequate for SMEs. This is consistent with a report by White (1999). He asserted that even when assistance instruments themselves are supportive of small business operations, their implementation may be inadequate or inefficient. Similarly, Treerapongpichit (2002) found that most small and medium businesses that successfully recovered over the past few years were in Bangkok when access to
government assistance is higher. Those in the provinces made a slow recovery because of their small-scale operations, outdated technology and limited access to government assistance.

It is noticeable, that a total of 56.9 percent of SME owners/managers agreed that the assistance from government should be targeted to specific needs of SMEs (Mean= 3.48). This is consistent with Hull (1987) as he asserted that support programs from the perspective of the owner/manager have failed to take into account differences in the individual attitudinal and behavioral characteristics of firms, and difference in business characteristics of individual firms, which imply that the specific and unique nature of the support provision is often needed as individual firms encounter different sets and degrees of problems. Finnegan (1999) also suggested that providing direct support services in such areas as training, consultancy, easier access to credit, marketing, advice on industrial relations and promoting linkages with larger enterprises are crucial especially for small firms. Therefore, a further problem is always possible if SMEs are treated as a single entity. Similarly, a research study conducted by Chulalongkorn University in the early nineties found that training programs provided by government organizations were appropriate but should be more specific in terms of qualification of participants and assistance needed (Leopairote, 1997).

With regards to the role of government on SMEs development, it is considered to be important especially after the economic and financial crisis based on spreading recognition that SMEs play an important role in the national economy. A country like Thailand, the role of Thai government is clear to be crucial as it determines its policies, plans, and programs for SME sector. However, there is much debate on the role of government in stimulating enterprise and SME development. Some researchers believe that this process is market distorting and should not be intervened. On the other hand, some agree that policies and regulations can improve the climate and lead to favorable
situation for SMEs. Hence, government should at all times be careful not to overburden business with an excessive amount of regulation which may lead to the possible suppression of business and spirit of entrepreneurship (Frederick, 2005).

Table 7
Role of Government on SMEs Support

<table>
<thead>
<tr>
<th>Role of Government</th>
<th>SME Respondents Mean Score</th>
<th>Standard Deviation</th>
<th>Institutions Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>2.72</td>
<td>1.022</td>
<td>2.81</td>
<td>1.112</td>
</tr>
<tr>
<td>G2</td>
<td>2.88</td>
<td>0.965</td>
<td>2.93</td>
<td>1.045</td>
</tr>
<tr>
<td>G3</td>
<td>2.85</td>
<td>0.866</td>
<td>2.95</td>
<td>0.955</td>
</tr>
<tr>
<td>G4</td>
<td>2.90</td>
<td>1.220</td>
<td>3.00</td>
<td>0.872</td>
</tr>
<tr>
<td>G5</td>
<td>2.69</td>
<td>1.065</td>
<td>2.78</td>
<td>0.896</td>
</tr>
<tr>
<td>G6</td>
<td>2.65</td>
<td>1.704</td>
<td>2.72</td>
<td>0.994</td>
</tr>
<tr>
<td>G7</td>
<td>2.60</td>
<td>1.301</td>
<td>2.70</td>
<td>0.975</td>
</tr>
<tr>
<td>G8</td>
<td>2.61</td>
<td>0.943</td>
<td>2.86</td>
<td>1.022</td>
</tr>
<tr>
<td>G9</td>
<td>2.58</td>
<td>0.880</td>
<td>2.69</td>
<td>1.176</td>
</tr>
<tr>
<td>G10</td>
<td>2.71</td>
<td>0.845</td>
<td>3.09</td>
<td>1.221</td>
</tr>
<tr>
<td>G11</td>
<td>2.66</td>
<td>0.725</td>
<td>2.85</td>
<td>1.065</td>
</tr>
<tr>
<td>G12</td>
<td>2.65</td>
<td>1.290</td>
<td>2.70</td>
<td>0.963</td>
</tr>
<tr>
<td>G13</td>
<td>2.77</td>
<td>1.103</td>
<td>2.68</td>
<td>1.007</td>
</tr>
<tr>
<td>G14</td>
<td>2.72</td>
<td>1.333</td>
<td>2.65</td>
<td>1.214</td>
</tr>
</tbody>
</table>

where:
G1: Government trusts the private sector to support its economic policies
G2: Local authorities do play a lead role in SME development
G3: Government delegates power to the local level in order to support local entrepreneurs
G4: Government has developed appropriate SME services to meet the needs of SME segments
G5: Government has facilitated the creation of markets for services
G6: Government has strengthened the role of stakeholders via stakeholder partnerships and the provision of services through business associations
G7: Government focuses on effectiveness of promotion activities rather than just outputs
G8: Government takes a long term strategic view and encourages a long term view in the business community
G9: Government consults regularly and openly with small business representative groups on SME policy issues
G10: Government has developed programs to support SME in specific target group
G11: Government has decentralized support organizations and services to SMEs
G12: Government does not impose excessive standardization of public accountability
G13: Government does not impose excessive control on local SME organization through funding
G14: Government usually delivers information and knowledge to businesses in appropriate forms

Table 7 compares the perception on the role of government on supporting SME of the two groups’ respondent in the sample. It is interesting to find that the perceptions of both groups of respondents appear to be quite different in terms of long term strategic view, and support
services for specific target group. SME respondents were not convinced that government has developed programs to support SME in specific target group (Mean score = 2.71) as compared with respondents from public and private organization (Mean score = 3.09). This suggests that government still needs to provide more information about existing assistance programs for specific target groups of SMEs.

Both groups of respondents agreed that government has developed appropriate SME services to meet the needs of SME segments (Mean = 2.90 for SME respondents and Mean = 3.00 for institution respondents). This is clear that government has attempted to provide a wide range of support to meet the needs for SMEs. It offers support to existing SMEs and also to prospective SMEs in different areas of assistance across different sectors. For instance, government provides training courses which focuses on facilitating and matching the requirements of SMEs. One respondent from institution involving SME promotion and development mentioned that “I have been working in the public sector for about fifteen years. I think at present, the government has attempted to support and at the same time promote SME sector as much as it can. A number of promotion organizations, and assistance programs have been established which there had never been before. SMEs now have more options on getting help from the government”.

However, SME owners/managers did not believe that government consults regularly and openly on SME policy issues with small business representative groups. Both groups of respondents rated this statement quite low (Mean score = 2.58 and 2.69) compare to other statements. This implies that SMEs would like to express their view regarding SME policy and development which is directly related to their businesses. One respondent of the institution group mentioned that “The government needs to contact a broader base of small companies, and listen to them more closely”. One SME respondent also stated that “Government should consult SMEs more widely. I still believe that the government needs to
put more effort on supporting SMEs and needs to let us participate more on supporting and promoting policy towards SMEs”.

Discussion

This study examined the critical barriers facing Thai SMEs and the perception of the respondents on the role of government on supporting SME sector. Respondents in this study can be generalized as being in trade sectors, forming as sole proprietorship, operating for over 5 years, and serving local markets. The majority of firms are located in urban area. These characteristics are similar to the results of the study by OSMEP (2008). The findings reveal that institutional barriers are seen as less serious than the other types of barriers for Thai SMEs. This may reflect the success of the Thai government efforts to reduce barriers by creating a favorable environment for business and setting up a number of agencies and programs to support SME sector. Conversely, external barriers to firms such as lack of market demand and changes in customer behavior seem to be more concerned by Thai SMEs. This suggests that government should place more attention on financial and marketing area in order to assist and support SME sector. Nevertheless, it is suggested that some barriers to firm performances can be prevented. SMEs themselves should realize their own problems and recognize the need for better understanding of those barriers and then seek for help from outside organizations.

It is hoped that the results of this study are especially useful to policymakers who may involve in SME development in Thailand. Clearly, the infrastructure and entrepreneurial activities in Thailand are still limited. The promotional and supporting role of government then assumes special meaning to Thai SMEs, as they were found to still need assistances from the government in order to overcome both internal and external barriers. As mentioned earlier, the Thai government has offered various types of assistance to SMEs such as
marketing, financial, training, technological, and information supports but the questions are raised whether those programs of assistance are really useful and fit for SMEs needs. In this study, the results appear to confirm the usefulness of government assistance programs for SMEs in Thailand. The findings reveal that from respondents’ point of view the government supports are useful for business and help improve business performance outcomes.

This research would suggest to SME owners and managers that receiving the assistance from government might well lead to better performances and to policymakers that there is a need for raising awareness of internal barriers and enabling SMEs to adapt to the sudden change of environment and challenges facing them. At the same time, the Thai government itself must take a proactive role in supporting SMEs to help SMEs overcome those firm’s barriers. Priority must be given to the development of effective business support, since the competitiveness of SMEs depends on them being able to apply their base of internal management resources and knowledge to overcome barriers to firm. In addition, a better understanding of barriers facing SMEs would also improve effectiveness of assistance.

It is not surprising to find that Thai SMEs would like to express their view regards to SME policy and development. For public policy makers, this study serves as evidence that the government should provide opportunities for SMEs and consult more regularly and openly with small business representative groups in order to achieve sustainable development of SME sector in Thailand.

**Conclusion**

The current research provides a great contribution to the existing research relating barriers encounter by SMEs. However, it should be noted that this study has its limitations. The most notable one is the fact that these results were derived from a sample of Thai SMEs and hence the concern that the findings might be country-specific. In addition, because of the
chosen sampling method, the results may be generalized only with regard to firms that are similar to those in this study’s sample. Future studies could use samples of firms from other countries to test and extend the generalizability of this findings. This study identified barriers facing SMEs as institutional, internal, external, financial, and other barriers. These groups of barriers might not have captured all areas of barriers that involved in SME operations. Future study could also examine the relationship between barriers and several dimensions of firm performance outcome.

References


Agency Costs and Ownership Structure
in New Zealand Unlisted Small Businesses

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Stuart Locke
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Introduction

This paper discusses a small business based investigation of principal-agent (PA) and principal-principal (PP) dimensions of agency cost. Panel data for 11 years to 2008, covering a sample of small businesses not listed on a stock exchange, are examined using multivariate statistical techniques. The sample of businesses includes sole proprietorships, partnerships and private companies and differs from previous studies in terms of selection bias and breadth of coverage. Several variables, including financial and operating structure, size, industry, performance and ownership concentration are found to be related to the level of agency costs. Consideration is given to how these variables, combined with the information opaqueness often associated with small businesses, might promote a broad range of policy issues and options for small business growth and sustainable profitability.

Aspects of agency cost have been researched for small and large listed companies but unlisted small businesses, many of which are unincorporated trading as sole proprietorships and partnerships, have not previously been the subject of robust empirical research. This paper makes a number of contributions to the agency cost debate, using a New Zealand data set for unlisted small businesses. Small businesses are important in most economies,
contributing significantly to gross domestic product (GDP), employment and government taxation revenue. In New Zealand, the number of small and medium enterprises (SMEs) increased by 2% between February 2006 and February 2007; the total number of people employed by SMEs increased by 18% between 2001 and 2007, and a 2008 report shows SMEs accounting for 31% of all employees in New Zealand (Cosgrove, 2008).

Few prior studies have attempted to measure directly agency costs for small businesses. Ang, Cole and Lin (2000) analysed small unlisted US companies and Fleming Heaney and McCosker et al. (2004) analysed unlisted Australian small companies. The PP agency cost analysis of Faccio, Lang and Young (2000) is also extended to this data set of smaller businesses. The panel data provides an opportunity to consider both cross-section and time-series effects and it is important that the econometric modelling distinguishes between fixed and random effects.

**Literature Review**

Costs associated with a lack of goal congruence between two parties were brought to the fore by Ross (1973) and were further explored by Jensen & Meckling (1976). These costs are often referred to as agency costs and can occur between a principal and agent and also between principal and principal. The majority of prior research has concentrated on the PA aspects of agency costs. An awareness of the PP component is relatively more recent.

To describe the costs of the resources used in the alignment of the interests of managers to the interests of owners, Jensen and Meckling (1976) created the idea of agency costs. With little accord surrounding the relationship between organisational performance and the ownership and control of a firm, it is widely accepted that separating ownership and management creates costs that would not exist had this separation been avoided (James, 1999). It is suggested that agency costs are inversely related to the proportion of ownership held by the primary owner (Ang, Cole & Lin, 2000). This argument is inline with Jensen’s
(1993) convergence of interests’ hypothesis, which states that managerial shareholdings create the alignment of the interests of the owners and managers, and as the proportion of managerial equity ownership increases firm performance also increases. Ang, et al (2000) claim that the incentive to consume perquisites or perks declines as the managers’ ownership share increases. They propose that because the managers’ share of the firm's profits rises with ownership managers will have less incentive to engage in non-value adding activities.

It is suggested by Bruce and Waldman (1990) and Schulze, Lubatkin, Dino & Buchholtz (2001) that parents who own a firm will employ and continue to employ their own children even when their offspring free ride or do not have the ability or skills needed to be a value creating member of the firm. Schulze, Lubatkin, Dino & Buchholtz (2003) posit that the effectiveness of a CEO in a family-owned firm may be reduced due to the effects of altruism, influencing the CEO’s perceptions of family members’ performance. Altruism may make it more difficult to punish poor performance because the effects spill over from the workplace to the home. (Schulze, Lubatkin, Dino & Buchholtz 2003). These factors contribute to agency costs.

It appears that agency costs are likely to be evident in small firms and that even closely held family businesses are not immune from this effect. The literature concerned with home-based, micro businesses and smaller businesses has not investigated empirically the magnitude of these potential agency costs.

**Principal Agent Problem**

A principal agent problem arises when agents pursue their own goals rather than the goals of the principal. It is the result of conflicting interests between managers and owners and asymmetric information (Chrisman, Chua & Litz, 2004). In many instances, agents will possess more or better information than the principals about strategic and operational
decisions and the results of those decisions (Ross, 1973). As a consequence of this
divergence of knowledge about the firm, agency problems are typically classified as
embodying adverse selection and moral hazard forms of market failure.

Adverse selection may occur in a firm when the manager knows more about his
managerial ability than the owner of the firm (Mankiw, 2007). In a situation such as this, the
owner runs the risk of employing a manager of low quality. The selection of a manager may
be adverse from the standpoint of the uninformed owner (Mankiw, 2007). As many
principals of smaller businesses are not trained in recruitment and interviewing and do not
employ experts to assist with recruitment, there is a significant possibility of poor hiring.

Moral hazard refers to the risk or hazard of inappropriate or immoral behaviour by the
agent (Mankiw, 2007). Moral hazard is a problem that arises when the principal cannot
perfectly monitor the agent’s behaviour. Because of this, the agent tends to expend less effort
than the principal considers desirable (Mankiw, 2007). According to Chrisman, Chua and
Litz, (2004), to mitigate the effects of adverse selection, owners (principals) have to incur
higher search and verification costs to ensure the right manager (agent) is selected. Likewise,
they suggest that to control for the moral hazard problem, rational principals will use an
optimal combination of incentives, punishments and monitoring to align the agents’ interests
to their own (Chrisman et al, 2004).

In order for principals to mitigate the PA problem they must incur costs, and these
costs are referred to as agency costs, a term coined by Jensen and Meckling (1976). Agency
costs, therefore, refer to the costs of the processes, systems and structures set up for the
purpose of monitoring, and aligning the interests of agents to those of the principals
(Chrisman, et al., 2004).

Principal Principal Problem
The PP cost has been articulated in the context of listed public companies in mature capital markets and has recently been tested in emerging markets. The extent to which PP is applicable for small business is developed in this paper. The PP problem is best described in a firm with one large shareholder and a fringe of small shareholders (Villalonga & Amit, 2004). In such a firm, the traditional agency cost or PA conflict is alleviated due to the large shareholder’s greater incentives to monitor the manager. But, a second type of conflict emerges as large shareholders exercise their substantial control and influence over firm matters and, as agency theory suggests, they have incentives to consume the firm's resources at the expense of the minority shareholders (Anderson & Reeb, 2004). It is important to note that the PP problem is more likely to overshadow the PA problem when the large shareholder is an individual or a family, as opposed to an institution. This is because an individual or a family will have incentives for both expropriation and monitoring, with a potentially greater incentive for expropriation.

Families and individuals are capable of expropriating wealth from the firm through excessive compensation, related-party transactions, or special dividends (Anderson & Reeb, 2003). While families/individuals may pursue actions that satisfy their own personal goals and happiness, such actions lead to poor firm performance relative to dispersedly owned firms and impact negatively on the firm’s other owners, creating PP costs (Anderson & Reeb, 2003).

A firm’s majority shareholder does not have to ‘loot’ directly from the company to impose costs on other owners. Accordingly, a diversified shareholder will evaluate investments using rules that maximise the value of the firms' residual cash flows (Anderson & Reeb, 2003). But large individual shareholders may evaluate investments based on their needs, such as firm growth, technological innovation or firm survival, rather than attempting to maximise shareholder value (Anderson & Reeb, 2003). Also, concentrated owners will
have a greater say in who runs and manages the firm, selecting people who will pursue their own goals rather than those of all owners.

Empirical research demonstrates the prevalence of PP costs and several studies confirm the role of family ownership and the subsequent performance of the firm. Burkart, Panunzi and Shleifer (2003) argue that family management, particularly by the founder’s descendent, is strongly related with poor decision making, and consequently, negative performance. Burkart, Gromb and Panunzi (1997) suggest that families expropriating wealth from a firm can adversely affect employees' productivity as they tend to redistribute wages from employees to the family. Morck, Strangeland and Yeung (2000) conclude, for a sample of U firms, that family shareholders generate excessive costs for the firm, which leads to lower returns in family firms relative to non-family firms.

Anderson and Reeb, (2003) investigate the relationship between founding-family ownership and firm performance. They find that this subset of family firms perform better than non-family firms. Moreover, they find that when family members serve as CEO, performance is better than with outside CEOs. Overall, their results suggest that minority shareholders are not adversely affected by family ownership. In a follow-up study Anderson and Reeb (2004) examine a sample of Standard and Poor 500 firms with founding-family ownership. Consistent with agency theory, they find that the most profitable firms are those where boards have either the same number or more independent directors as family board members. Consequently, they note that in firms with relatively few independent directors, the firm performance is significantly worse than in non-family firms. Their results highlight the importance of independent directors in mitigating conflicts between shareholder groups.

Using data on all Fortune 500 firms during 1994-2000, Villalonga and Amit, (2004) also find that family ownership creates value but only when the founder serves as the CEO of the family firm or as its chairman with a hired CEO. When descendants serve as CEOs,
however, firm value is destroyed. These final two results provide evidence to support stewardship theory. Specifically, the theory purports that founding-family members may identify closely with the firm and more-or-less treat the company as their own (Gomez-Mejia, Larraza-Kintana, & Makri, (2003); Davis, Schoorman, & Donaldson, (1997). Hence, the owner will act as a steward of the company, nurturing it and ensuring its success. Using parametric and non parametric tests on a sample of Canadian listed firms, Gadhoum, (2008) provides support for the PP cost theory. The family-owned firms and group-affiliated firms exhibit evidence of expropriation of minority shareholders.

**Data**

The sample consists of New Zealand unlisted small businesses, covering the period 1998-2008 inclusive, and was made available by the Management Research Centre of the University of Waikato. The data are collected annually in conjunction with the New Zealand Institute of Chartered Accountants as part of a financial benchmarking reporting programme, and the total time series reaches back to 1982. The random sample is drawn from accounting practices that prepare end of year financial returns for small businesses. This avoids the selection bias of using bank related data or those businesses that submit survey responses to government agencies. There is a maximum of 11 years of data for each business and given the high attrition rate for SMEs, this leads to an unbalanced panel dataset. Firms included in the study represent a range of industries. After adjustments, the dataset provides 1100 observations from a total of 100 businesses appearing each year. Data relating to listed companies, used for comparative purposes, are drawn from an online data base run by NZX (the NZ Stock Exchange) called NZX Deep Archive. Variables used in the study are presented in Table 1. The descriptive statistics for the full sample of 100 small companies for 1998-2008 are presented in the Appendix.
Table 1

Variable definition

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agency Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Operating expenses to sales</td>
<td>This ratio is calculated as operating expenses divided by annual sales.</td>
</tr>
<tr>
<td>(Opexsal)</td>
<td>Operating expenses excludes the labour related expenses such as corporate</td>
</tr>
<tr>
<td></td>
<td>wages, salaries and so on, and interest expense, rent, leasing and</td>
</tr>
<tr>
<td></td>
<td>hiring expenses, purchases, depreciation and bad debts written off (%)</td>
</tr>
<tr>
<td>Log of Opexsal (Inopexsal)</td>
<td>Natural log of Opexsal</td>
</tr>
<tr>
<td>Sales to assets ratio (Salass)</td>
<td>This ratio is calculated as total sales divided by total assets.</td>
</tr>
<tr>
<td>Log of Salass (Insalass)</td>
<td>Natural log of Salass</td>
</tr>
<tr>
<td>Income ratio (Incratio)</td>
<td>This ratio is calculated as net income/ number of working owners divided</td>
</tr>
<tr>
<td></td>
<td>by total sales</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td></td>
</tr>
<tr>
<td>Ownership</td>
<td>This ratio is calculated as total working owners divided by total number</td>
</tr>
<tr>
<td></td>
<td>of employees.</td>
</tr>
<tr>
<td><strong>External monitoring</strong></td>
<td></td>
</tr>
<tr>
<td>Leverage (bkdbtass)</td>
<td>This ratio is calculated as total debt divided by total assets.</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
</tr>
<tr>
<td>Insales</td>
<td>Natural log of sales</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on assets (%)</td>
</tr>
<tr>
<td>Age</td>
<td>Number of years operating in the industry</td>
</tr>
<tr>
<td>Industry</td>
<td>Dummy variable 1, if the industry affects the agency costs and 0 otherwise.</td>
</tr>
</tbody>
</table>

**Method**

The movement of PA and PP costs is based on financial data supplied by individual businesses and differs from previous studies of small businesses that drew on government
surveys or bank related data. Ang, Cole and Lin (2000) suggest principal agency costs are reflected in the ratio of operating expense to annual sales, and the ratio of annual sales to total assets. Faccio, Roug and Young (2001) propose measuring principal–principal costs using dividend payout. In the case of small businesses, dividends may not necessarily be appropriate, e.g. for a non-company structured firm, and an alternative profit distribution metric is necessary.

An ANOVA is used to investigate whether the PA and PP variables are the same between businesses and whether for individual businesses they remain the same over time. Prior expectations are that neither of these two tests is likely to suggest constancy because industry and size effects in first instance, and market effects in the second instance, are likely to be confounding issues.

**ANOVA test**

The testable hypotheses for the proposed ANOVA are:

**Hypothesis 1:**

H₀: There is no difference in the mean agency costs of the different firms in the same year.

Hₐ: There is difference in the mean agency costs of the different firms in the same year.

**Hypothesis 2:**

H₀: There is no difference in the mean agency costs of the same business in different years.

Hₐ: There is difference in the mean agency costs of the same business in different years.

Table 2

Panel A: Total return on each company in 1998-2008

<table>
<thead>
<tr>
<th>Company (No)</th>
<th>SS</th>
<th>Company (No)</th>
<th>SS</th>
<th>Company (No)</th>
<th>SS</th>
<th>Company (No)</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25609.66</td>
<td>26</td>
<td>27052.22</td>
<td>51</td>
<td>19093.54</td>
<td>76</td>
<td>46194.45</td>
</tr>
<tr>
<td>2</td>
<td>23422.16</td>
<td>27</td>
<td>16035.36</td>
<td>52</td>
<td>50081.79</td>
<td>77</td>
<td>74994.43</td>
</tr>
<tr>
<td>3</td>
<td>32973.11</td>
<td>28</td>
<td>4914.491</td>
<td>53</td>
<td>24142.74</td>
<td>78</td>
<td>62879.33</td>
</tr>
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</table>
### Panel B: Return on all companies in across the eleven years

<table>
<thead>
<tr>
<th>Year</th>
<th>SS</th>
<th>Year</th>
<th>SS</th>
<th>Year</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>286656.7</td>
<td>2002</td>
<td>290415.3</td>
<td>2006</td>
<td>313222</td>
</tr>
<tr>
<td>1999</td>
<td>4.38E+10</td>
<td>2003</td>
<td>315837</td>
<td>2007</td>
<td>259093</td>
</tr>
<tr>
<td>2000</td>
<td>373853.6</td>
<td>2004</td>
<td>333433.7</td>
<td>2008</td>
<td>353249.4</td>
</tr>
<tr>
<td>2001</td>
<td>247382.2</td>
<td>2005</td>
<td>296032.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Both hypotheses require a two tail test and are relatively straightforward. In Table 2 the ANOVA test results are reported for each company in Panel A and each year in Panel B. The total sum of squares, which measures the variation around the mean for each company (Panel A) and in each year (Panel B) differ in each instance and therefore the null hypotheses are not accepted. The ANOVA formally tests the hypothesis that they are all the same and neither hypothesis 1 nor hypothesis 2 can be accepted.

An advantage of panel data methods includes the use of data for which the span of time-series data is insufficient and would thus preclude the study of many hypotheses of interest. Other benefits include more powerful properties in the testing procedures compared to standard time-series methods. However, panel data can give rise to statistical problems in regression analysis. In particular, it is important to determine whether there are fixed effects present in the variables. Hausman's specification test or \( m \)-statistic differentiates between random and fixed effects models by testing for correlation between the variables (x) and the individual random effects (\( \varepsilon_i \)).

Table 3

Hausman test results

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Prob&gt;chi2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation expenses to sales ratio</td>
<td>0.4510</td>
</tr>
<tr>
<td>Assets to sales ratio</td>
<td>0.3189</td>
</tr>
<tr>
<td>Income ratio</td>
<td>0.5943</td>
</tr>
</tbody>
</table>

The results for the Hausman test are presented in Table 3. The general random effects model may be written:
Where \( i = 1, \ldots, N \) firms, \( t = 1, \ldots, T \) time period with \( k \) regressors in \( X_{it} \) and \( u_{it} \) there is a normal error term and \( Y_{it} \) is agency cost. The test statistic has a \( p > 0.05 \) for all three ratios so the null hypothesis of no correlation cannot be rejected and the random-effects model is appropriate for the PA and PP agency costs measures.

**PA and PP regressions**

PA and PP costs have been associated with various factors in previous studies. As noted above, it has been suggested that increases in block ownership decrease PA as the large shareholder monitors management more closely than dispersed shareholders do and consequently there is a higher level of goal congruence.

Regressions using the two PA metrics suggested by Ang, Cole and Lin (2000), viz. the ratio of operating expense to annual sales, and the ratio of annual sales to total assets as dependent variables, are estimated. The independent variables, which are either continuous or binary, fall into one of three categories relating to corporate structure, external monitoring and control variables.

**Panel regression analysis**

**PA agency costs**

The regression analysis is undertaken in three steps involving the analysis of panel data. The first step is to regress the ratio of operating expenses to annual sales on each of the variables while controlling for external monitoring. Step two is to regress the ratio of operating expenses to annual sales on each of the variables while controlling for ownership. Step three is to regress the ratio of operating expenses to annual sales with each of the variables described above. Table 4 presents the results for the operating expenses to sales.
measure of agency costs. The second group of regression analysis follows a similar three stage process using the ratio of sales to assets as the dependent variable. Table 5 presents the results for the sales to assets measure of agency costs and these are discussed below under findings.

**PP agency costs**

To examine the explanatory power of various variables relating to PP cost, a proxy for the proposed dividend payout metric of Faccio, Lang and Young (2001) is necessary as many small businesses do not use dividends as a method of distributing profit. The PP proxy, net income/number of working owners divided by total sales, is regressed against ownership structure, industry, and control variables.

The regression analysis follows a three step process similar to that used in the PA analysis above. Step one is to regress the profit per owner ratio with each of the variables while controlling for external monitoring. Step two involves regressing the profit per owner ratio on each of the variables while controlling for ownership. The last regression considers the profit per owner ratio relationship to the variables described above. Table 6 presents the results for the profit per owner ratio measure of PP costs, and these are discussed below under findings.
Table 4

Panel data random effects regressions of agency costs and operation expenses to sales ratio

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
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<tr>
<td><strong>Number of obs = 1100a</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td><strong>Number of groups = 100</strong></td>
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<td></td>
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<tr>
<td><strong>Regressor</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Corporate Structure variables</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Number of working Owners (ownership)</td>
<td>-.0092243***</td>
<td>-.009747***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.009035)</td>
<td>(.009008)</td>
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<tr>
<td>External monitoring variables</td>
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<td>.0315784***</td>
<td>.0316078***</td>
</tr>
<tr>
<td>Leverage (bkdbtass)</td>
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<td>(.0121059)</td>
<td>(.0121504)</td>
</tr>
<tr>
<td>Control variables</td>
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<td></td>
</tr>
<tr>
<td>Log of annual sales (lnsales)</td>
<td>-.2284466***</td>
<td>-.2094605***</td>
<td>-.2266216***</td>
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<tr>
<td></td>
<td>(.0225212)</td>
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<tr>
<td>Years of operations (Age)</td>
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<td>.0099083*</td>
<td>.0104428*</td>
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<tr>
<td></td>
<td>(.0056161)</td>
<td>(.005604)</td>
<td>(.0056088)</td>
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<td>-2.76e-08</td>
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<td></td>
<td>(3.10e-06)</td>
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<tr>
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<td>yes</td>
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<td>Regression summary statistics</td>
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<tr>
<td>$R^2$</td>
<td>0.1429</td>
<td>0.1416</td>
<td>0.1453</td>
</tr>
</tbody>
</table>

This model provides standard errors which are in parentheses.

* Balanced panel;  * Significant at 10% level;  ** Significant at 5% level;  *** Significant at 1% level
Table 5

Panel data random effects regressions of agency costs and sales to assets ratio

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regressor</th>
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<th>2</th>
<th>3</th>
</tr>
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<tr>
<td>Number of groups = 100</td>
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<tr>
<td>Corporate Structure variables</td>
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<tr>
<td>Number of working owners (ownership)</td>
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<td>.0006668*</td>
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<td>(0.0010614)</td>
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<td>Leverage (bkdbtass)</td>
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<td>(.014342)</td>
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</tbody>
</table>

This model provides standard errors which are in parentheses.

* Balanced panel; * Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level
### Table 6

Panel data random effects regressions of agency costs and income ratio

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<th>Variables</th>
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<tbody>
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<td><strong>Number of obs = 1100</strong></td>
<td>0.0008909***</td>
<td>0.009035***</td>
<td>0.0002324</td>
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<tr>
<td><strong>Number of groups = 100</strong></td>
<td>(0.0002324)</td>
<td>(0.0002318)</td>
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<td><strong>Regressor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Structure variables</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Number of working owners (ownership)</td>
<td>-0.0086258**</td>
<td>-0.0088686***</td>
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<tr>
<td></td>
<td>(0.0031956)</td>
<td>(0.003177)</td>
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<tr>
<td>External monitoring variables</td>
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<tr>
<td>Leverage (bkdbtass)</td>
<td>-0.0430591***</td>
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<td>-0.0434737***</td>
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<td>(0.0056899)</td>
<td>(0.0038617)</td>
<td>(0.0056771)</td>
</tr>
<tr>
<td>Years of operations (age)</td>
<td>-0.0032284**</td>
<td>-0.0028457*</td>
<td>-0.030021*</td>
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<tr>
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<td>(0.0013365)</td>
<td>(0.0013489)</td>
<td>(0.0013375)</td>
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<tr>
<td>Return on assets (roa)</td>
<td>-1.30e-06*</td>
<td>-1.53e-06</td>
<td>-1.31e-06*</td>
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<tr>
<td></td>
<td>(8.12e-07)</td>
<td>(8.13e-07)</td>
<td>(8.10e-07)</td>
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<tr>
<td>Industry effects</td>
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<td>yes</td>
<td>yes</td>
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<td>Regression summary statistics</td>
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<tr>
<td>$R^2$</td>
<td>0.1953</td>
<td>0.1890</td>
<td>0.2007</td>
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</tbody>
</table>

This model provides standard errors which are in parentheses.

* Balanced panel； * Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level

The sign-on debt in the above regressions indicates an increase in debt is associated with an increase in agency costs. This differs from the results of Ang et al. (2000). The extent to which debt holders will monitor the performance of small business remains an open question. Quasi-equity, i.e. loans from the owner(s), can represent a significant portion of debt (Cosh and Hughes, 1994). There is evidence to suggest that banks, as major external
financial providers for firms, use mechanical credit scoring and arbitrary covenants (Berger and Udell 2002, 2006). With larger businesses, and larger loans, relationship building is more pervasive but there is no clear evidence of close monitoring. Nevertheless, bank guidelines working on security and cash flow ratios are likely to have impact and this is reflected in the results.

The debt to assets ratio is highly significant, as shown in Tables 4 and 5, but the sign differs from the finding of Ang et al. (2000). Singh and Davidson (2001) find a significant positive relationship for leverage in their study of large companies while a study of small firms by Fleming et al. (2004) found a non-statistically significant positive relationship with operating expense ratio, and significant positive relationship with asset utilisation ratio. In order to investigate this further, the variable is subjected to testing of its stationarity. The convergence of a variable is analysed with a unit root test. Debt-to-asset ratio (D/A) differentiates between each business and the industry average D/A are analysed determining the level of convergence between each company’s D/A and the industry average.

The Levin, Lin and Chu (LLC) Test is appropriate for a common autocorrelation coefficient, i.e. a homogenous $\alpha$, and the null hypothesis is that each individual time-series contains a unit root against an alternative that each time-series is stationary:

$$\Delta p_{ij,t} = c_{ij} + \alpha_p p_{ij,t-1} + \sum_{h=1}^{K(j)} \beta_{hj} \Delta p_{ij,t-h} + \epsilon_{ij,t}$$

Table 7 presents the results for the LLC test. The test statistics indicate a high level of significance with P value $= 0.0000$. Therefore, the null hypothesis is not accepted indicating that each individual time series does not contain a unit root.
Table 7
Levin-Lin –Chu test results

<table>
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<tr>
<th>Coefficient</th>
<th>t-value</th>
<th>t-star</th>
<th>p&gt;t</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.28059</td>
<td>-32.181</td>
<td>-18.24280</td>
<td>0.0000</td>
</tr>
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</table>

An extension of the LLC testing, known as Im, Pesaran and Shin test (IPS), which handles heterogeneous value of $\alpha$, i.e. for different companies and different years, is also considered. The IPS unit root test allows for individual effects, time trends, and common time effects. The test considers whether all series are non-stationary and the null hypothesis is:

$H_0$: $\alpha_t = 0$ for $i = N_1, 1, ..., N$

$H_1$: $\alpha_t < 0$ for $i = 1, 2, ..., N$

The test allows for individual fixed effects and allows $\alpha_t$ to vary over the cross-section under the alternative hypothesis. Table 8 presents the results for the IPS test.

$$
\Delta p_{ij,t} = c_{ij} + \alpha_{ij} p_{ij,t-1} + \sum_{h=1}^{k} \beta_{ijh} \Delta p_{ij,t-h} + \epsilon_{ij}
$$

Table 8
Im, Pesaran and Shin test results

<table>
<thead>
<tr>
<th>t-bar test, N,T=(50,11)</th>
<th>Obs=450</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented by 1 lags(average)</td>
<td></td>
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<tr>
<td>t-bar</td>
<td>cv10</td>
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<tr>
<td>-2.491</td>
<td>-1.640</td>
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</table>
The test statistics P value is 0.0000 indicating that the null hypothesis cannot be accepted and each individual time-series does not have a unit root. Therefore, no convergence of debt to asset ratio for the small unlisted companies to the industry average debt to asset ratio is supported.

**Findings**

The analysis confirms that PA cost is correlated with several variables that have been noted in previous studies. It is noted that in some instances, prior studies have presented confounding results typically reflected by a sign reversal. The sign is important in terms of whether the explanatory variables make a positive or negative contribution to PA cost. The finding in terms of ownership structure, shown in Tables 4 and 5, are consistent with Ang et al (2000), indicating that ownership structure is inversely correlated with the expense ratio and positively correlated with the asset utilisation ratio. Further, it can be seen from Tables 4 and 5 that PA is related to industry type. This is similar to the observation of Chrisman (2004) who notes that firm size is negatively correlated with the expense ratio and positively correlated with asset utilisation ratio. These observations align with Ang et al (2000) but they differ from those of Ward and Filatotchev (2009). Firm performance is positively related to the assets utilisation ratio reported in Table 5. This finding is consistent with Fleming et al (2004).

Also reported in Tables 4 and 5, is the relationship between PA and the maturity of the firm. It is found to be statistically significant, indicating that agency cost increases with the age of the firm, as reflected in a positive expense ratio and negative correlation with the asset utilisation ratio. This has the same sign as Ang et al who find a non-significant positive
relationship between firm age and expense ratio, and a non-significant negative relationship with assets utilisation ratio.

PA is significantly positively related to firm debt-to-assets ratio, with the statistics presented in Tables 4 and 5. This finding is consistent with Fleming et al (2004) but opposed Ang et al (2000) who propose that with more debt there is an increased external monitoring from banks or restriction on the free cash flow to management, thus lowering agency costs. In part, the accounting conventions result in measurement problems for debt and assets in small businesses. The adoption of international financial reporting standards (IFRS) in most countries, except the US, will assist in ensuring both debt and asset measures are market based. The difficulty caused by historical cost assets having low written down values and debt being at market value distorts the numbers and introduces an aging bias.

Table 9 presents a comparative summary of the findings relating to PA with those of some key prior studies.

PP agency cost is found to be correlated with variables noted in previous studies. The size of the business is positively correlated with PP as shown Table 6, indicating that as firms grow so too does the potential for PP costs. Jensen, Solberg, and Zorn (1992) noted this for publicly listed companies. Intuitively, it seems likely that as firm size grows more power will be vested with a managing owner who is able to expropriate profit to their own advantage. Next it is noted that industry factors play an important role, with some being more prone to PP costs than others, which is similar to the observation of Chrisman et al. (2004). As profitability declines and the surplus diminishes the opportunity to divert relatively more resources to the major owners decreases.
Table 9

Variables of the key empirical studies that investigate PA agency costs

<table>
<thead>
<tr>
<th>Study and year</th>
<th>Variable</th>
<th>Result</th>
<th>Consistence with</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Positively relationship with assets utilisation ratio</td>
<td>Consistent with Ang et al (2000)</td>
</tr>
<tr>
<td></td>
<td>Year of operation in the industry</td>
<td>Positive relationship with expense ratio(10% significant) negative relationship with expense ratio (1% significant)</td>
<td></td>
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</tbody>
</table>
As shown in Table 6, the maturity of the business is negatively correlated with PP cost. This suggests that longer life businesses are not only profitable in a sustainability sense but also, exploitation by senior owner(s) does not occur. PP cost has a significant negative correlation with leverage. As the proportion of debt in the capital structure increases so too does the interest expense with associated demand on cash flow, and it appears this situation curtails the likelihood of a major owner diverting additional resources their own direction.

A summary statement is shown in Table 10.

Table 10

Variables of the key empirical studies that investigate PP agency costs

<table>
<thead>
<tr>
<th>Study and Year</th>
<th>Variable</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year of operation in the industry</td>
<td>Negative relationship with agency cost</td>
</tr>
<tr>
<td></td>
<td>Debt-to-Assets</td>
<td>Negative relationship with agency cost</td>
</tr>
</tbody>
</table>
Conclusion

The analysis provides the first robust empirical analysis of small businesses that are not stock exchange listed companies. Data availability is a significant issue and this impedes the research process in terms of exploring independent variables that might reasonably be expected to be available for listed public companies. The research indicates that both PA and PP agency costs are present in small business and in many instances these findings are consistent with prior research for listed businesses. However, one significant confounding factor is the differential tax rate applying to businesses versus individuals. Sole proprietorships and partnerships are taxed at the same rate as individuals while incorporated businesses in the sample have a lower rate than the top individual marginal taxation rate. The rational owner will endeavour to use the business to make as many payments of a personal nature as possible to lower the tax incidence and consequently push up the PA and PP cost measures. Prior studies have correctly noted that regulatory frameworks, with associated compliance costs and taxation incidence, impact upon the form of business structure.

The paper makes an important contribution to the understanding of agency cost in smaller businesses. It is apparent that institutional factors, such as differences in marginal taxation rates between individuals and various business forms, make it rational to structure small businesses in a tax efficient manner. Similarly, the extent to which personal emolument can be extracted through the firm as a tax deductible expense will tend to load the proportion of operating expenses to revenue. While these ideas have been previously articulated there has been no prior detailed analysis to establish the veracity of such contentions.

The analysis indicates there is considerable variability in the burden of agency cost and this raises the potential for regulatory and policy reforms that may enhance the productivity and growth in the sector. The PP cost has received no prior consideration and, based on the results, this is of considerable importance. The well- meaning parents who
encourage the second generation children to participate and then run the business are subject to both PA and PP cost burdens.

**Implications**

Agency cost has two components, typically referred to as PA and PP, and these require separate consideration. First, it is important to remove any taxation incentivisation for financial engineering in the small business sector. The distortion between equity returns and debt returns gives rise to a preference for quasi-equity and distorts the productive base and effective pricing of risk. The common requirement for personal guarantees for business financing similarly distorts the operational efficiency as personal risk is not limited, and in the absence of a gambling mentality risk, taking is reduced. The results tend to be found in unnecessary overhead loadings with very high bankruptcy costs impounded into the cost of capital.

Second, as the number of owners changes the potential for one managing owner or family group to expropriate the profit of other owners becomes more pronounced. The requirement for greater disclosure in financial reporting by all businesses the ensuing reduction in opacity will potentially reduce this distortion concerning the effective distribution of scarce capital resources. Similarly, the distortion between corporate and non-corporate structures in terms of taxation minimisation and agency costs will flow through to any computerised credit scoring application for small business banking and is likely to work against those with higher administration to revenue and lower revenue to asset ratios. The adverse selection risk is not apparent to proprietors and consequentially is distorting the flow of funding through a mispricing of risk due to poor signalling by small business.
References


### Appendix

#### Descriptive statistics

<table>
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<tr>
<th>Variables</th>
<th>1998 mean median</th>
<th>1999 mean median</th>
<th>2000 mean median</th>
<th>2001 mean median</th>
<th>2002 mean median</th>
<th>2003 mean median</th>
<th>2004 mean median</th>
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The Role of Knowledge Management in SME Networks

Pietro Evangelista\textsuperscript{1,2}, Mario Raffa\textsuperscript{1,3} and Emilio Esposito\textsuperscript{1}

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Abstract
Knowledge Management (KM) is a critical area for small business managers in the today competitive environment. However, there is a general consensus in relation to the fact that the benefits of KM have not been fully exploited by small and medium sized enterprises and this is reflected in the literature gap in this field. Indeed, empirical studies have been rarely conducted on this topic. The main aim of this paper is to shed light on the KM practices in small firms. To this purpose, the paper presents the results of a questionnaire survey carried out in a SME network consisting of 25 companies operating in high-technology sectors and located in the eastern area of Naples City (Italy). Survey findings highlight the following points: a) the surveyed companies show significant KM needs; b) knowledge exchanged is mainly tacit; c) firms express the need for both internal and external KM systems enabling inter-firm collaboration for developing common projects; d) there are some relevant factors motivating the adoption of internal and external KM systems but also significant barriers.

1. Introduction

One of the most significant evolutions in the business environment over the past decade is the dawn of the new economy. The velocity and dynamic nature of markets has created a competitive incentive among many companies to leverage their knowledge assets as a means of creating value and achieving a competitive edge. The focus on knowledge management (KM) is a critical area also for small and medium sized enterprises (SMEs). In particular, the management of knowledge assets may provide small firms new tools for survival, growth and maintaining a sustainable competitive advantage (Omerzel and Antoncic, 2008).

There is a general consensus in business practices and academia on the fact that SMEs are falling behind large companies in developing KM practices and benefits of KM has not fully exploited by these firms. This is reflected in a literature gap where little research efforts have been carried out on this topic. Indeed, to date, there is an abundance of literature describing how various large companies are successfully practising KM, but the reasons why small firms
show poor usage of KM tools are still unclear. In fact, little empirical studies have been conducted to identify the factors influencing KM adoption in SMEs (Finkl and Ploder, 2009). In addition, there is a growing need for qualitative analysis of the effects of knowledge management practices of networked SMEs (Valkokari and Helander, 2007).

The main aim of this paper is to shed light on the KM practices in small firms. The paper presents the preliminary results of an empirical investigation carried out in a cluster of 25 firms located in the eastern area of Naples city (Italy). The most part of this cluster comprises small firms located in the same area but operating in different high-technology sectors. The methodology adopted has been organised into two main stages. Firstly, a literature review on KM and its usage in small business has been carried out. Secondly, the outcome of the literature review allowed to set-up a semi-structured questionnaire that has been validated in a number of focus group discussions involving SMEs’ managers, academics and consultants.

The paper is organised into seven sections. Following this introduction, a literature review on KM (section 2) and KM in small businesses (section 3) is provided. Section 4 describes the context of investigation, while the methodology used is detailed in section 5. The main findings emerging from the empirical survey are presented in section 6. Conclusions and recommendations are outlined in section 7.

2. Knowledge and Knowledge Management

Research on knowledge and knowledge management spans the disciplines of economics, information systems, organizational behaviour and theory, psychology, strategic management, and sociology. This diversity has contributed to the rapid advance of research in specialised areas of inquiry that investigate different aspects of organizational learning and knowledge management.

Knowledge management, like knowledge itself, is difficult to define as concepts and practices evolved quickly through the 1990s. Two main issues are evident in this evolving
path: i) knowledge is a critical resource, rather than land, machines, or capital (Drucker, 1993), and ii) organizations generally poorly managed it. If more attention were paid to creating, providing, sharing, using, and protecting knowledge, the promise was that organizational performance would improve (Earle, 2001).

Current definitions of knowledge reflect a range of standpoints. The following definition contains a comparatively broad approach because it includes a range of phenomena such as values, insight, and information: “Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms” (Davenport and Prusak, 1998).

An understanding of the concept of knowledge and knowledge taxonomies is important because theoretical developments in the knowledge management area are influenced by the distinction among the different types of knowledge. The literature offers a number of different knowledge taxonomies. Drawing on the work of Polanyi (1962, 1967), Nonaka (1994) explicated the most cited classification of knowledge distinguishing tacit and explicit knowledge dimensions. The author also views knowledge as existing in the individual or the collective. Other classifications (Alavi and Leidner, 2001) refer to knowledge as declarative (know-about or knowledge by acquaintance (Nolan Norton 1998), procedural (know-how), causal (know-why), conditional (know-when), and relational (know-with) (Zack 1998). Likewise, research in the domain of knowledge management seems fragmented.

According to Sveiby (1997) the expression “managing knowledge” appears for the first time in a context of artificial intelligence at the end of 1980s. Early research in the field of KM was interested on the possibility of using information technology to support the process
of individual learning. Again, in the artificial intelligence community, Wiig (1993) was one of the first scholars to recognise the limits of a primarily technological approach and he defined KM in term of creation, learning, sharing (transferring), and using or leveraging knowledge as a set of social and dynamic processes that needed to be managed (Iandoli and Zollo, 2007). Almost at the same time, Nonaka and his research group conducted a number of studies on the management of innovation processes in large Japanese companies. These studies together with the total quality management movement and the concept of continuous improvement, re-evaluate the overall role that human resources play at all levels in organisations discovering what was not yet obvious in organisational practice: the centrality of the individual in the knowledge creation process and the consequent need to recognise the person’s necessary level of competence and autonomy (Nonaka and Takeuchi, 1995). Most of the contributions in the vast literature on KM can be summarised to one of these two approaches or attempts to integrate the two perspectives (Iandoli and Zollo, 2007).

According to Davenport and Prusak (1998), most knowledge management projects have one of the following three aims:

a) to make knowledge visible and show the role of knowledge in an organization, mainly through maps, yellow pages, and hypertext tools;

b) to develop a knowledge-intensive culture by encouraging and aggregating behaviours such as knowledge sharing (as opposed to hoarding) and proactively seeking and offering knowledge;

c) to build a knowledge infrastructure—not only a technical system, but a web of connections among people given space, time, tools, and encouragement to interact and collaborate.

Bhatt, (2001) defined KM identifying the different phases in which a KM project may be organised. In fact, the author defined KM as a process of knowledge creation, validation, presentation, distribution, and application. These five phases in knowledge management
allow an organization to learn, reflect, and unlearn and relearn, usually considered essential for building, maintaining, and replenishing of core-competencies.

In a broad sense, Quintas et al. (1997) define knowledge management as the process of continually managing knowledge of all kinds to meet existing and emerging needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities. Interestingly, the author pointed out that KM refers to the management of all kind of knowledge, but only for developing new opportunities.

However, the KM definition suggested by Iandoli and Zollo (2007) has been considered the working definition for this paper as it simultaneously refers to objectives, knowledge involved, tools and phases of KM. According to this definition: “KM is the process of creating, capturing, and using knowledge to enhance organisational performance. It refers to a range of practices and techniques used by organisations to identify, represent, and distribute knowledge, know-how, expertise, intellectual capital, and other forms of knowledge for leverage, reuse and transfer of knowledge and learning across the organisation”.

As illustrated above, KM initiatives involve not only an implementation of ICT but also social and cultural facets. However, while ICT does not apply to all of the issues of knowledge management, it can support KM in different ways. In this sense, according to Alavi and Leidner, (2001), knowledge management systems (KMS) refer to a class of information systems applied to managing organizational knowledge. That is, they are IT-based systems developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application.

3. Knowledge Management in SMEs

Although introducing knowledge management systems into SME is a particular challenge because of the limited resources of these kinds of companies (Herrmann et al, 2007), the
literature review on KM reveals that the most part of research in this field is focused on large companies. In fact, the understanding of the organizational theory and practice considerations of KM has mainly been derived from large company experiences. Consequently, the potential of KM seems not fully exploited by small firms and this is reflected in a literature void where little research contributions on this topic have been published. In addition, research on KM in SMEs highlights some relevant different features (Pillania, 2006 and 2008).

According to the review carried out by Thorpe et al (2005), research on KM in the SMEs context may be broken down into three distinct fields:

1. the knowledgeable SME manager or entrepreneur;
2. the knowledge systems and routines embedded within the context of the firm and their immediate networks;
3. the institutional and policy framework that is intended to support knowledge production within SMEs.

As asserted by Frey (2001), although major corporations have led the way in introducing and implementing KM, it is increasingly important for small businesses to manage their collective intellectual assets. In KM practices, issues that small businesses will face will not be simply a scaled-down replica of large-company experiences (Sparrow, 2001). Desouza and Awazu (2006) discuss five key peculiarities that differentiate knowledge management practices in SMEs and larger companies:

1. in SMEs there is lack of explicit knowledge repositories. Instead, each manager/owner acts as the knowledge repository.
2. Common knowledge possessed by members of the SMEs is deep and broad. This common knowledge helps in the organization of work by easing issues of knowledge transfer, sense-making, and application.
3. SMEs by their nature and due to deliberate mechanisms are skilled at avoiding pitfalls of knowledge loss. The close social ties between members of the SME act as a deterrence against employees leaving the business. In cases where employees do leave the business, there are plenty of available knowledge resources that can be mobilized to quickly fill the void.

4. SMEs have a knack for exploiting foreign sources of knowledge. Since they are resource constrained, and cannot spend efforts to create knowledge, they look outside the organization for knowledge.

5. SMEs knowingly or unknowingly, manage knowledge the right way – the humanistic way. Technology is never made part of the knowledge management equation. The use of technology in an SME is mostly limited to acts of automation (such as the use of cash registers) and at times for informative purposes (storing of employee contact information in databases).

Similarly, McAdam and Reid (2001) firstly describe the key dimensions of KM (knowledge construction, knowledge embodiment, knowledge dissemination and knowledge use/benefit) and then, for each dimension, conduct a comparison between large firms and SMEs.

Sparrow (2001) indicates four components that figure strongly in small firm knowledge projects:

- the appreciation of personal and shared understanding;
- knowledge bases and knowledge systems;
- the integrated and contextualized action needed for knowledge projects in SMEs, and
- the knowledge and organizational learning processes in SMEs.

The author also suggests an emergent model of approaches towards developing knowledge management practices in SMEs. The model has as its most central tenet, the
assertion that KM development in SMEs needs to be supported through a process that recognizes and incorporates the current thinking and priorities in the knowledge project.

Egbu et al. (2005) highlight that knowledge generated in SMEs is tacit in nature due to various reasons. In the context of SMEs some elements of KM are practiced but in an ‘ad hoc’ fashion. Indeed any technological infrastructure that is put in place to support KM must be adapted to the organisation’s needs and not the other way round.

Another stream of KM research regards factors that can influence the success of KM implementation. Also in this area, most of research efforts are heavily focused on large companies as early adopters and superior performers of KM were large and multinational corporations. As such, existing factors are mainly large companies oriented, thereby reflecting their situations and needs. Directly applying these factors into the SMEs environment may not be sufficient without an understanding of their very own and specific conditions (Wong, 2005). By integrating the common factors and introducing some new ones, Wong (2005) and Wong and Aspinwall (2005), propose a more comprehensive model for implementing KM in SMEs based on the following 11 factors:

• management leadership and support;
• culture;
• IT;
• strategy and purpose;
• measurement;
• organisational infrastructure;
• processes and activities;
• motivational aids;
• resources;
• training and education; and
• human resources management.

The above set of critical success factors is important because of it can act as a list of items for SMEs to address and deal with when accomplishing KM. This helps to ensure that essential issues and factors are covered when small firms are planning and developing a KM strategy. It can also provide a basis for them to evaluate their KM practices (Wong, 2005).

4. The Context of Investigation

The empirical investigation on which this paper is based has been conducted in the East Naples high-tech enterprise system (ENS). This network of firms has been established in March 2007 and it comprises 25 companies. The total number of ENS employees is about 3,000 and the total turnover is about 400 million Euros in 2008. The ENS mainly consists of SMEs as shown in table 1. In the table, the latest EU definition of SMEs proposed by the EU Commission has been used (European Commission, 2005).

<table>
<thead>
<tr>
<th>Employees Bands</th>
<th>N.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Small</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Medium</td>
<td>11</td>
<td>44</td>
</tr>
<tr>
<td>Large</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 shows that ENS the most part of firms operates in the aerospace and ICT sectors. It is worth to outline the working mechanisms of ENS. On the basis of a specific market opportunity, a firm proposes a project and it launches a call for adhesion. The firms that joint the project create a network inside ENS. They select a coordinator and develop the project. In this way, ENS is characterised by a set of peer temporary relationships orientated to specific projects. It is a dynamic network in which project collaboration relationships are continuously formed and reformed.
Table 2
East Naples high-tech enterprise system: company sectors

<table>
<thead>
<tr>
<th>Manufacturing companies</th>
<th>Aerospace</th>
<th>1</th>
<th>Aermec Sud</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>ARM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>ASTRO Ind.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>Fox-Bit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>K4A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>Magnaghi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aeronautica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>Vulcan Air</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td>8</td>
<td>Farina Impianti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
<td>Mecfond</td>
</tr>
<tr>
<td>Transport (lines, infrastructures and equipments)</td>
<td>10</td>
<td>AET</td>
<td></td>
</tr>
<tr>
<td>Service companies</td>
<td>Aerospace (Research &amp; Development)</td>
<td>11</td>
<td>MARS</td>
</tr>
<tr>
<td></td>
<td>ICT</td>
<td>12</td>
<td>Euro. Soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13</td>
<td>Intecs</td>
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<td></td>
<td></td>
<td>14</td>
<td>ITS</td>
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<tr>
<td></td>
<td></td>
<td>15</td>
<td>Kell</td>
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<tr>
<td></td>
<td></td>
<td>16</td>
<td>Naosys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17</td>
<td>Null Pointer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td>SRSe</td>
</tr>
<tr>
<td>Management training and consulting services</td>
<td>19</td>
<td>Form &amp; ATP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
<td>Mater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21</td>
<td>Protom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22</td>
<td>Tecno-In</td>
</tr>
<tr>
<td>Transport (system and service)</td>
<td>23</td>
<td>Ansaldo S.F.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>Lead Tech</td>
</tr>
<tr>
<td>TLC</td>
<td></td>
<td>25</td>
<td>Canale Otto S.p.A.</td>
</tr>
</tbody>
</table>

5. **Methodology**

After the literature review, a questionnaire survey has been conducted. The main aim of the survey is to shed light on the most relevant features characterising the usage of KM in ENS firms. The survey methodology has been organised into the following five steps:

*a) Definition of basic survey objectives and preparation of the draft questionnaire.* In this phase a draft version of the questionnaire has been prepared together with the basic survey objectives.
b) Establishment of focus groups. In order to test the suitability of the basic survey objectives and comprehensibility of the draft questionnaire a focus group involving 8 experts with different competence and professional background was established. The focus group has been developed in three different phases. Firstly, the topic investigated has been presented in order to make focus group participants familiar with it. Secondly, the draft questionnaire has been submitted to the panellists in order to get their useful feedback and comments. Finally, panellists’ remarks have been discussed in a plenary session.

c) Re-focussing of survey objectives and questionnaire. On the basis of feedback received during the focus group discussion, the questionnaire has been finalised. Most of the questions included in the questionnaire are based on a Likert scale ranging from 1 to 9. Some other questions allow more qualitative answer in order to allow respondents to express their own personal opinion.

d) Test of the questionnaire. In this step, the final version of the questionnaire has been tested through 3 pilot interviews carried out in ENS firms.

e) Survey implementation. The survey has been conducted in spring 2008. The total number of respondents is 18 out of 25 companies with a response rate of 72%. The questionnaire has been submitted during face-to-face interviews involving at least two managers with different skills and role (e.g. a manager involved in the strategic firm decisions making process and a manager involved in the operation management). This allowed obtaining both strategic and operational perspectives.

In order to have a more comprehensive picture of the East Naples high-tech enterprise system, information from complementary sources (e.g. company websites, company reports and industry magazines) have been collected and analysed.

6. Findings
Firstly, according to the definition of KMS provided by Alavi and Leidner (2001), the survey indicated that the vast majority of the sample firms (83%) have a KMS in place (see figure 1).

![KMS adoption](image)

73% of these companies adopt an internal KMS aimed at supporting knowledge management inside the firm. KMSs supporting the internal and external management of knowledge flows are implemented only in 4 firms (27% of 15 firms). This result is consistent with the tools used by ENS firms for KMS implementation (see figure 2). The most widespread forms of KMS implementation are through the Internet website and work teams. In fact these are relatively simple tools that fit the needs of managing knowledge inside small firms. The high importance attached to work teams also suggests that, in high technology sectors, in addition to ICT, interactions and interpersonal relationships are a fundamental tool for exchanging and sharing knowledge, as suggested by the literature.

![Tools for KMS implementation](image)
Nevertheless, advanced and structured KMS equipped with a document management system, data mining, and decision support systems are rarely used. These tools are more suitable for the implementation of external and internal KMSs as they support knowledge management both inside and outside the firms.

Although only 4 firms use internal and external KMS, almost all firm investigated claimed for wider KMSs to support project collaboration relationships. These systems enable KM practices not only inside a single firm, but also among firms involved in a common project that continuously need to exchange and share critical knowledge. For this reason, the benefits of a KMS enabling project collaboration relationships have been analysed (see figure 3). In the figure the average value of importance for each expected benefit is reported.

The figure interestingly shows that internal and external KMSs may have a positive impact not only on the innovation and the operational management, but also on the identification of the market opportunities. These features further clarify the potential support that internal and external KMSs can provide to support project collaboration relationships. In fact, the exploitation of market and innovation opportunities are the main aim of the common projects carried out by ENS firms. In this context, operational management is a fundamental tool that allows projects to be implemented effectively.
However, a number of barriers to KMSs implementation have been indicated (see figure 4). Interestingly, technological barriers and tacit nature of knowledge exchanged are the less relevant barriers. This may be explained considering that in the SMEs context, work teams allow sharing informal knowledge. Nevertheless, the unavailability of partners to share knowledge and the need to protect critical information are the most relevant barriers. This suggests that SMEs investigated seem oriented to preserve their own intellectual assets from the possible opportunist behaviour of potential partners.

Another aspect investigated relates to information that companies are willing to share through the adoption of a KM platform as shown in figure 5. This platform may assume the structure of a complex knowledge base in which ENS firms involved in different projects may share critical information.
The most important information that firms are willing to share are related to linkages with institutions and funding opportunities. This answer has been motivated by the lack of resources in SMEs that traditionally prevent these firms to manage effectively relationships with local authorities. Other important information are related to market. Firms attach significant importance to information about market features and opportunities because of they have to be able to recognise and exploit opportunities faster and more effectively in current dynamic business context. Indeed, as knowledge assumes a critical importance in new product/service development, information of this kind are critical to be shared. Another interesting issue concerns the human resources management. In fact, as shown in the above figure, a KM platform can provide useful tools both in recruiting and training employees and new staff. Finally, ENS firms show a low interest in sharing information about management control systems, administrative issues and quality management. This may be explained
considering that these information are generally firm specific and they don’t need to be shared for the effectively development of common projects.

7. Conclusions and Recommendations

This paper attempts to explore KM practices in small firms through an empirical investigation carried out in a set of 18 SMEs located in the eastern area of Naples. The main preliminary findings of the survey indicate significant KM needs of the surveyed companies. In addition, it has been found that ENS firms adopt predominantly internal KMSs using simple ICT tools. The surveyed firms also show the need for wider (external) KMSs enabling inter-firm collaboration in developing collaborative projects.

On the basis of the above findings, it is possible to outline some recommendations for SME managers. The survey indicates the following three areas for developing KM practices.

i) Management of market knowledge. KMS may support relationships with customers in order to facilitate both the exchange of relevant information and improving communication with them. Furthermore, a KMS should support the retrieval of information about market opportunities.

ii) Management of technology knowledge. This is a critical area for firms operating in high technology sectors. KM tools should support the circulation of critical information about know-how and technology. In the ENS context this appears particularly important as firms participate in collaborative projects aimed at developing new products and services. Practical examples may be the virtual sharing of design tools (e.g. CAD, CAE e CAM) and management and control systems (e.g. MRP and ERP) related to the same project.

iii) Management of relational knowledge. In developing and managing collaborative projects it is important to have in place tools facilitating the collaboration among participants. Nevertheless, the adoption of these tools may be inhibited by the
need to protect intellectual assets and cultural barriers. The ultimate goal of KMS in SME networks context should be to achieve an appropriate balance between individual needs and project partnership.

References


Developing the Exploration of Governance in Small Firms

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Abstract
Governance is now a major area of study in the finance, accounting, and management disciplines that draws on a number of research frameworks and is attracting an increasing level of attention within the small business and entrepreneurship domains. This paper uses research frameworks from those disciplines to identify and analyse difficulties in making simplistic assertions based on large firm considerations about the benefits and prescriptions for good governance activities in small firms.

These difficulties exist primarily because governance in small firms is driven by a different set of structures and process than those that apply to large firms. In the large firm governance literature there is recognition that governance can be approached from a control perspective or from a collaboration perspective. While these theoretical perspectives may hold in small firms, the prescriptions (around the Board of Directors primary role, board structures, executive stock ownership and the market for corporate control) need to be viewed with a different outcome in mind. Small firms may be able to achieve governance outcomes without strict internal and external structures and processes.

This paper takes a normative perspective as a precursor to establishing empirical approaches to evaluation. While the limited analysis identifies contextual variations, this does not mean small firms have an excuse to ignore good governance characteristics or that regulators can totally ignore governance requirements for small firms. However, the analysis indicates that these must be considered in an appropriate contextual framework and not merely be transferred from the large firm context. An important consequence of the research is the need for researchers and policy makers to develop a clearer understanding of the what, why, when and how of governance in privately owned firms.

Introduction
As suggested by Gibson (2009), “governance is now a major area of study in the finance, accounting, and management disciplines that draws on a number of research frameworks and is attracting an increasing level of attention within the small business and entrepreneurship domains”. This paper uses research frameworks from those disciplines to
identify and analyse developments in the field and to identify difficulties in making simplistic assertions based on large firm considerations about the benefits and prescriptions for good corporate governance activities in small firms.

This paper takes a normative perspective as a precursor to establishing empirical approaches to evaluation. It relies initially on the governance literature to identify assumptions and consequent good governance practices in the large firm environment. Entrepreneurship and small business literature that identifies the different contexts existing in small firms are then presented. Finally an analysis of the consequences of relying on the assumptions and processes from a large firm perspective in a small firm context is used to identify the variations that might be appropriate.

The Nature of Governance

Governance has a macroeconomic and country wide public policy dimension wherein policy makers within countries and regions seek to develop a framework where good governance practices are implemented in order to enhance the economic performance of the country or region (see, for example, Iskander and Chamlou, 2000). In part, such policy development is informed by an understanding of governance from a microeconomic focus at the firm level, and it is at that level that this paper focuses its arguments. The conclusions are of course expected to have influence at the broader policy level.

(Note that firm is used throughout this paper because while it is probably true that the vast majority of large firms are corporations that may not be true in smaller firms, many of which choose to operate as sole traders or in partnerships. The expression corporate governance implies a restriction to firms that have a corporate structure, yet many of the principles and processes discussed under the governance rubric also have potential application to firms structured in other ways.)
At the firm level, the most widespread definition (Mason and OMahony; 2008) is that of the Organisation for Economic Cooperation and Development (OECD) which, after replacing company and/or corporation with firm, describes governance as:

… a set of relationships between a firm’s management, its board, its shareholders and other stakeholders [that] provides the structure through which the objectives of the firm are set, and the means of attaining those objectives and monitoring performance are determined (modified from OECD, 2004, p.13)

Such definitions are used to determine best practice and, according to Ramaswamy, Ueng and Carl (2008) the core values of an efficient system of firm level governance include:

- Fairness: Protecting shareholder rights and ensuring the equitable treatment of all shareholders including minority and foreign shareholders.
- Responsibility: Recognizing the rights of all stakeholders as established by law, and encouraging active co-operation between the corporation and stakeholders in creating wealth, jobs and sustainable enterprises.
- Transparency: Ensuring adequate and timely disclosures of all material matters regarding the company, including its financial situation, performance, ownership and governance structure.
- Accountability: Providing for the strategic guidance of the company, effective monitoring of management and its accountability to the stakeholders.

Other aspects of governance that are also often included as determinants of best practice (see King, 2002) are:

- Discipline: commitment by senior management to adhere to behavior that is universally recognized and accepted to be correct and proper.
- Independence: mechanisms to avoid conflicts of interest.
- Social responsibility: responsive to social issues placing a high priority on ethical standards.
This OECD (2004) definition and the associated indicators of good practice have evolved from a number of theoretical and practical outcomes primarily developed in the context of large firms and discussed in the next section.

**Theoretical Approaches to Governance**

As suggested by Sundaramurthy and Lewis (2003) “… governance is an increasingly provocative topic” (p.397). To highlight this, they focus on a paradox framework that highlights underlying tensions between proponents of control approaches (exemplified by agency theory) and proponents of collaborative approaches (exemplified by stewardship theory). Figure 1 provides a schematic representation of the Sundaramurthy and Lewis (2003) framework. It highlights the extremes of approaches to governance. These extremes range, in respect of underlying assumptions, from a focus on individualistic opportunism engendered in an environment of mistrust to a trust based environment focusing on collectivist cooperation. In respect of prescriptions for practice the focus shifts from the exercise of discipline to control self serving behavior to the provision of service based on commitment to the organization.

These dichotomous extremes are also endorsed by Letza, Kirkbride, Sun, and Smallman (2008) who present an “orthodox view” (with a focus on adding value for stockholders / shareholders) and an “alternative view” (where the focus is on adding value for the benefit of all firm stakeholders). Elaborations around these extremes have manifested in a number of theories that, in respect of control, include agency theory, the market myopia view and to some extent the abuse of executive power view. In respect of the collaboration dimension, approaches have moved to incorporate elaborations that include the extension of the executive power view into a resource dependence perception of stewardship theory and a resources provision focused stakeholder theory.
While figure 1 provides a useful characterisation of the extremities of this continuum of approaches, it still hides that more expansive range of approaches. Following Letza et al. (2008), Abor and Biekpe (2007), and Mason and O’Mahony (2008), the following discussion focuses on an expanded agglomeration of other approaches including: as agency / control approaches - agency theory and a myopic markets perspective; and as stewardship / collaboration approaches – an executive power view, a resource dependence view and stakeholder (resource provision) theory.

At the core of the agency/control approaches are, as Abor and Biekpe (2007) acknowledge, the theoretical underpinnings that come from the classic thesis, “The Modern Corporation and Private Property” by Berle and Means (1932). Central to that thesis is the

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Figure 1

Theoretical Perceptions of Governance

Contrasting Approaches to Corporate Governance

<table>
<thead>
<tr>
<th>Control</th>
<th>Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency theory (economics and finance)</td>
<td>Stewardship theory (sociology and psychology)</td>
</tr>
<tr>
<td>Individualist Opportunism</td>
<td>Assumptions</td>
</tr>
<tr>
<td>Extrinsic</td>
<td>Human tendencies</td>
</tr>
<tr>
<td>Goal conflict (risk differential)</td>
<td>Motivation</td>
</tr>
<tr>
<td>Distrust</td>
<td>Management-owner relations</td>
</tr>
<tr>
<td>Discipline and monitor</td>
<td>Board’s primary role</td>
</tr>
<tr>
<td>Outsiders</td>
<td>Board structure</td>
</tr>
<tr>
<td>Non-duality</td>
<td>Executive stock ownership</td>
</tr>
<tr>
<td></td>
<td>Market for corporate control</td>
</tr>
<tr>
<td>Reduces goal conflict, avoids increasing risk differential</td>
<td>Fosters firm identification and long-term relations</td>
</tr>
<tr>
<td>Constraints self serving behavior</td>
<td>Cuts psychological commitment</td>
</tr>
</tbody>
</table>

(Source: Sundaramurthy and Lewis, 2003, p.398)
fundamental agency problem associated with the separation of ownership and control in a firm.

The agency theory approach regards the central problem of corporate governance as the control of self interested managerial behaviour in a principal-agent relationship (Letza et al., 2008). Agency theory is centred on agency costs (monitoring expenditures, bonding expenditures and residual losses) associated with the self interest of agents (managers). Share prices reflect these agency costs and they need to be reduced to increase firm value. Governance is consequently focused on reducing agency costs by determining the most efficient contracts governing the principal-agent relationship and the optimal incentive scheme to align the behaviour of the managers with the interest of owners (Letza et al., 2008).

The myopic market perspective is a variant of the principal-agent model that questions its pre-occupation with short-term gains in returns, profit, share prices and other performance measures induced by market pressures (Letza et al., 2008) that often force managers to behave in a way divergent from the maximisation of long-term wealth for shareholders (Blair, 1995). The governance focus from the myopic market perspective is on the development of an environment in which shareholders and managers are encouraged to share long-term performance horizons rather than focus on short term gains.

Stewardship/collaboration approaches are not predicated on opportunistic behaviour but expect managers ‘‘to do a good job [and] to be a good steward of corporate assets’’ (Donaldson and Davis, 1991). Governance is focused on ensuring structures and processes that facilitate performance, because it is performance that defines the success and achievements of management that improve value.

Overlapping the control/collaboration distinction is the abuse of executive power approach. The underlying premise of this view is that current institutional restraints on
managerial behaviour, rather than preventing managerial abuse of power are means through which managers can legitimise their abnormal overpayment. Consequently the supporters of this model propose statutory changes in corporate governance that allow executive management the power to develop the longer term business, while holding them rigorously responsible to all stakeholders involved in the business. The basic objective of corporate governance in this guise is managerial freedom with accountability (Letza et al., 2008).

The focus on managerial freedom that is central to the avoidance of the abuse of executive power is also central in the resource dependence approach (Pfeffer, 1973). Here however the focus is on non-executive directors (through the board) enhancing the ability of a firm to protect itself against the external environment, reduce uncertainty, or co-opt resources that increase the firm’s ability to raise funds or increase its status and recognition (Letza et al., 2008). There are four primary types of broadly defined resources provided by boards of directors. These are: advice, counsel, and know-how; legitimacy and reputation; channels for communicating information between external organizations and the firm; and, preferential access to commitments or support from important actors outside the firm (Pfeffer and Salancik, 1978). This resource facilitation role is achieved by board of directors mainly through their social and professional networks (Abor and Biepke, 2007).

The approach to governance that is most widely divergent from the control approaches is stakeholder theory. At its core is the proposition that a wider objective function of the firm (incorporating all stakeholders) is more equitable and more socially efficient than one confined to shareholder wealth (Keasey, Thompson and Wright, 1997). The well-being of other groups such as employees, suppliers, customers and managers, who have a long-term association with the firm and therefore a “stake” in its long-term success, is recognised. The goal of corporate governance is to maximise the wealth creation of the corporation as a whole (Letza et al., 2008). As Abor and Biepke (2007) point out “the stakeholder approach also
considers the provision of resources as a central role of board members” (p.289-90). The board of directors is seen as a place where conflicting interests of stakeholders are mediated.

Clearly these approaches to the underlying assumptions, and therefore required actions, in understanding and facilitating appropriate governance show a wide range of perspectives from a tight control of managerial activity in the interests of shareholders to a broader understanding of management pursuing interests of the firm that consider all stakeholders. Although, even though stakeholder theory embraces a wider set of interested economic actors, it is still regarded by some as too narrow because it lacks the analytical capacity to account for social embeddedness and legitimacy of governance (Mason and O’Mahony, 2008).

This brief review of theoretical approaches indicates that there are still a number of unresolved issues that in many respects hinge on the underlying perception of the firm as either a structure to facilitate the absentee management of shareholder interests in an environment of managerial self interest, or as a structure to facilitate management for the benefit of all stakeholders in an environment of responsible stewardship. The following section considers the manifestation of these theories in our understanding of the large firm environment.

**Governance in the Large Firm Environment**

Brunninge, Nordqvist, and Wiklund (2007) indicate that there is a broad coverage of many issues in contemporary corporate governance literature. The focus however appears to be primarily on control approaches, covering issues such as the relationship between owners, boards of directors, top management teams and executive officers, as well as the remuneration of executives at different levels. According to Brunninge *et al.* (2007) a problem with much of this governance research is a primary focus on one type of governance
mechanism, most commonly the board, while excluding others. This focus is reflected in Abor and Adjasi’s (2007) identification of the three main corporate governance themes, two of which focus on boards: the adequate separation of management from the board; and, ensuring that the board has an effective mix of independent and non-independent directors. (The third main theme is establishing the independence of the auditor and therefore the integrity of financial reporting, including establishing an audit committee of the board.)

What is also recognised as an important structural difference is the variation in board structures across cultures, “ranging from two-tiered supervisory and management boards in Germany, to insider-dominated boards in Japan, to mixed boards in the United States” (Li and Harrison, 2008, p.607). Not surprisingly these different cultural environments are also associated with different underlying theoretical perspectives. Letza et al. (2008) argue that the efficiency of the stakeholder approach draws on Japan and Germany as examples of successful industrial societies in which extensive stakeholder involvement with the firm is pervasive, and typically, corporate goals are defined more widely than shareholders’ profits.

Finally there are a number of governance practices that are reflected in broader research dimensions such as that of contingency theory. Sundaramurthy and Lewis (2003) indicate for example: the nature of resources and information demanded may influence the appropriate mix of insider-outsider directors (Daily and Schwenk, 1996); and, the financial institutions represented on a firm’s board may affect the amount and type of financing obtained (Stearns and Mizruchi, 1993; Claessens, Djankor, Fan, and Lang, 2002). Also identified is the importance of the data collection and reporting system (including the financial reporting system) that informs stakeholders (including debt providers, non-working owners, family members etc. as well as shareholders) about the outcomes of governance processes (Uhlaner, Floren and Geerlings, 2007).
These brief insights indicate that, while there is some recognition of the existence and use of collaborative stakeholder approaches in practice, most large firm research into governance structures and processes are still focused on control approaches such as agency theory with a focus on board structures and practices.

**Governance in the Smaller Firm Environment**

There has in recent years been an extension of governance research into the small firm area (Brunninge et al., 2007). As is often the case the focus of such research has been influenced by large firm findings and has also been primarily aligned with the control approaches. This is a particularly serious shortcoming in studies of small firms where firms are closely held and governance issues more entwined. This means that in small firms ownership, board membership (if they exist), and top management often overlap. Recognition of these shortcomings has seen emerging research that draws on and integrates an array of theoretical perspectives from both economics and other social science disciplines (Uhlaner, Wright and Huse, 2007) including those alternate governance approaches identified earlier.

As elaborated by Gibson (2009), Uhlaner, Floren, and Geerlings (2007) identify the following as organisational contexts that are issues to be considered in researching governance in privately held firms.

*Institutional contexts* - capturing cross-cultural and country differences

*Sector characteristics* – including variations across different industry sectors because of different technologies, patterns of ownership, the nature of resources, and differing competitive environments

*Ownership structure* - understanding variations that might exist in the proportion of ownership of privately held firms (for example, by individuals, employees and/or
family members) and how those proportions influence and are influenced by the structure and scope of governance.

Life-cycle – understanding the influence on governance structures and scope

Firm size – recognizing that governance structures and processes are likely to be less diverse and less complex and less formalized in very small firms but increase in complexity as firm size increases.

Gibson brings together these suggestions by Uhlaner, Floren, and Geerlings (2007) and others in the research framework presented in Figure 2. Within the figure there is identification of principal structures, processes and outcomes as well as allowance for influencing contingencies. Prepared with a small firm focus it proposes recognition of broader outcomes than owner wealth maximization and the different contextual influences on structures but still acknowledges a role for governance processes in small firms.
Notwithstanding these expectations, much of the research in small firm governance still reflects that in the large firm arena. As Uhlaner, Floren, and Geerlings (2007) indicate a lot of attention to corporate governance in privately held firms has focused on the role of boards.
Interestingly, much of the empirical evidence from studies of the selection and composition of board members in small companies seems to support the view that boards – on average – are, unlike boards in large firms, largely passive entities (Gabrielsson, 2007). For example, surveys of board practices have reported that small companies have relatively few directors on their board, ranging between three and seven members, and with the possibility that there may be one or two family members on the board (Corbetta and Tomaselli, 1996; Cromie, Stephenson, and Monteith, 1995). Where there is an outside director, this is often a person who has a close connection to the business, such as the family attorney, a banker, or a close friend of the owner (Corbetta and Tomaselli, 1996; Rosenstein, 1990). The board is therefore a formal but primarily passive entity (Gabrielsson, 2007). This is not surprising when the context is considered because “[i]n most [small firms] … owners … have direct and detailed insights into internal processes of the firm. As a result, there is less need for the control function of the board” (Brunninge et al., 2007, p.297). Hence, while boards may be an important governance structure in large publicly traded firms they may not be so important in small privately owned firms (Gibson, 2009) and our understanding of governance in small firms needs to reflect this contextual difference.

There is however a growing body of research that considers the benefits of boards beyond simple control concepts and supports the existence of boards in small firms from a collaboration perspective. Central in this research is the existence of external board members who can assist in making better decisions, attracting better resources (Abor and Adjasi, 2007), and enhancing strategic change. This approach is supported by research results. For example Brunninge et al. (2007) support the proposition that “governance variables related to ownership, the board of directors and the top management team all affect strategic change and that it is important to examine the interaction effects of these governance mechanisms” (p.295). More specifically their results indicate that it is possible to facilitate strategic change
by introducing governance mechanisms that increase the strategic capacity and competence of the firm (p.304). Gabrielsson (2007) supports the influence of this growing stream of research which has shown that active and empowered boards in small firms can provide assurance to critical strategic issues facing their operations while protecting their assets.

There are other structural mechanisms that have attracted some research interest is the data collection and reporting system that informs stakeholders (including debt providers, non-working owners, family members etc. as well as shareholders) about the outcomes of governance processes (Uhlaner, Floren, and Geerlings, 2007). The nature of the small firm is that reliance is often on informal mechanisms in which, if they exist at all, financial systems are extremely rudimentary (Gibson and Cassar, 2002). However, there is also acknowledgement that good corporate governance practices (such as enhanced financial systems) assist small firms in improving their prospects of obtaining funding from investors and financial institutions (Abor and Adjasi, 2007).

Again, while brief and selective, this overview indicates that research involving governance in small firms is supporting the existence of contextual differences that indicate different structures and processes are required to those of large firms although there are still clear benefits to be achieved by following some of the lessons learnt in larger firms. There still appears, however, to be too great a consideration of practices that comply with control approaches as discussed in the following section.

Consequences of Applying Large Firm Approaches in the Small Firm Environment

As indicted in the previous discussion, while the theoretical perspectives may hold, the prescriptions for governance in small firms need to be viewed with a different outcome in mind. Small firms may be able to achieve governance outcomes without strict internal and external structures and processes. Similarly the more detailed prescriptions for good
governance practice of discipline, transparency, independence, accountability, responsibility, fairness, and social responsibility (King, 2002) are likely to be influenced by different contextual settings in small firms.

As Abor and Biepke (2007) suggest, it is tempting to believe that corporate governance would not apply to small firms since the agency problems are less likely to exist. Certainly from a control perspective, small firms tend to have a less pronounced separation of ownership and management than larger firms. However, as discussed earlier, there are broader approaches than that focused on control. The collaboration approach with a focus on stewardship, resource management and stakeholders does appear to offer benefits to small firms that are not evident in the control approach.

In spite of such suggestions, there continue to be calls for the application of large firm corporate governance practices and policies in small firms. As Corbetta and Salvato (2004) suggest, the ongoing tendency toward improving board functions within publicly listed firms will extend to small firms by mimicry and institutional pressures. Clarke (2007) expresses the same concerns when arguing “it is assumed that the rules, norms and best practice [related to a contemporary Australian corporate governance project] will automatically filter down to [small firms]” (p.7). The difficulty for small firms is that neither resources nor practical guidance are offered to their multi-tasking managers and directors charged with corporate governance compliance. Policy reforms affected small firms disproportionately, as their key personnel are stretched to providing compliance and monitoring, in addition to maintaining the ongoing management of firms. Such circumstances are both politically unfair and economically inefficient (Clarke, 2007).

In addition to the issues above, it is also useful to remember that the competitive edge of small entrepreneurial firms lies in their creativity and innovation and it would be disastrous
should corporate governance dictates undermine value creation efforts (Abor and Adjasi, 2007).

Conclusions

While the theoretical perspectives of governance may hold, the prescriptions for small firms (around the Board of Directors primary role, board structures, executive stock ownership and the market for corporate control) need to be viewed from a collaborative approach and with a different outcome in mind. Small firms may be able to achieve governance outcomes without strict internal and external structures and processes. Similarly the more detailed prescriptions for good governance practice of discipline, transparency, independence, accountability, responsibility, fairness, and social responsibility (King; 2002) are likely to be influenced by different contextual settings in SMEs.

This paper has taken a normative perspective as a precursor to continuing the empirical evaluation of appropriate practices in small firms. It has relied on the governance literature to identify assumptions and consequent good governance practices in the large firm environment. Entrepreneurship and small business literature that identified some of the different contexts existing in small firms have then been presented. Finally an analysis of the consequences of relying on the assumptions and processes from a large firm perspective in a small firm context has identified variations that might be appropriate.

While the results identify contextual variations that show small firms to be different to large firms in respect of governance, this does not mean small firms have an excuse to ignore good governance characteristics or that regulators and policy makers can totally ignore governance requirements for SMEs. However, the analysis indicates that these must be considered in an appropriate contextual framework and not merely be transferred from the large firm context. An important consequence of the research is the need for researchers and
policy makers to develop a clearer understanding of the what, why, when and how of governance in privately owned firms.

References


I. INTRODUCTION

Recently, Korean government formulated and executed many policies for vitalizing SMEs by promoting their cooperation with large firms (mainly vertical buyer-supplier cooperation). These policies, however, focused mainly on economic performance of individual firms and also the lack of strategic and network approach. To overcome this limitation, this study tries to explain performance of individual firm from the perspective of business ecosystem. Business ecosystem is defined as "loose networks of suppliers, distributors, outsourcing firms, makers of related
products or services, technology providers, and a host of other organizations, which affect, and are affected by, the creation and delivery of a company's own offerings" (Iansiti and Levien 2004b). Loose networks imply that we must consider loose-tie networks (e.g., third-tier networks, potential suppliers from same or different industries) as well as strong-tie networks (e.g., first-tier suppliers) (Song, Kim, and Rhee 2009).

A company is not only a member of a single industry but also a part of a business ecosystem that crosses a variety of industries. For example, Apple Computer is the leader of an ecosystem that crosses at least four major industries: personal computers, consumer electronics, information, and communications. In a business ecosystem, companies co-evolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations (Moore 1993). Therefore, the performance of a firm is derived from something that is much larger than the companies themselves: the success of their respective business ecosystems.

The leader in a business ecosystem can increase ecosystem productivity by simplifying the complex task of connecting network participants to one another or by making the creation of new products by third parties more efficient. It enhances the robustness of an ecosystem by consistently incorporating technological innovations and by providing a reliable point of reference that helps participants respond to new and uncertain conditions, and encourage ecosystem expansibility (niche creation) by offering innovative technologies to a variety of third-party organizations (Iansiti and
Levien 2004b). The leader can realize these ecosystem goals by providing so-called platforms for ecosystem members. A platform is a set of solutions to problems that is made available to the members of the ecosystem through a set of access points and interfaces (Iansiti and Levien 2004a). Ecosystem participants use this platform to build its own offerings. Therefore a platform is a "package of resources" wherein a leader company shares values with its ecosystems and/or other members (Kim & Song, 2008). Apple's iPod is creating a myth of the 21st Century through the externality of a network created based on platform leadership (Kim 2009).

This study extends the findings of Iansiti and Levien (2004a, b). First, the success of SMEs' cooperation with large firms might be dependent partly on whether their business ecosystem is healthy or not. Thus, we tested whether the healthiness of a business ecosystem affect the performance of SMEs through collecting data from Korean suppliers. Second, this study explores whether and how each of the ecosystem indexes contributes to business performances differently over the developmental stages of a firm. This study built a model that explains the process in which the operating profit of SMEs is determined by the healthiness of a business ecosystem: productivity, robustness (stability), and niche creation (expansibility).

II. BUSINESS ECOSYSTEM

Kim (2009) used "flower-honeybees" metaphor to explain how a business ecosystem works. There are two types of interaction between a flower-the platform-and honeybees-ecosystem members. The first type of interaction is when
honeybees focus on making their own honey using the flower. This is similar to the ‘standalone’ business model where honeybees fly around and use flowers to create their own honey and sell the honey to earn money. The second type is where the honeybees focus on supplying moisture so that the honeybees and flowers come together for the flowers to produce fruits. This becomes the source of strength that enables fruits to create flowers and evolve into an ecosystem of the next generation. The platform model can evolve and develop in the long term only when it becomes a model that produces fruits (Kim 2009).

Platform is the core of the business ecosystem approach in expanding and developing mutually beneficial cooperation between small-to medium-sized companies and large corporations. The strength of a platform grows in the market in tandem with an increase in the number of business partners of the platform. This is the same as the relationship between flowers and honeybees. If honeybees suddenly disappear in earth, the ecosystem of the earth will be placed in danger. If the number of honeybees, which help to provide moisture, decreases, in ey dct, the plants will not be able to bear fruit. In cooperative relationship between small-to medium-sized companies and large corporations, large company must play as a platform leader, which is also called the keystone company. Keystone companies lure honeybees through a fragrant flower, while there are others that are not able to attract honeybees due to unavailability of fragrant flowers. Thus, fragrance plays an
important role in attracting the honeybees and enhancing the interfaces of the ecosystem.

The healthiness of a business ecosystem can be judged on various sub-dimensions. For a business ecosystem to continuously evolve and develop, the productivity of an ecosystem needs to be increased. In addition, members of the business ecosystem need to stably maintain a certain number of objects, despite environmental changes; thereby, increasing robustness of the ecosystem. Other required factor is ecosystem expansibility (niche creation), where innovative members grab new business opportunities and achieve expansion (Iansiti & Levien 2004; Kim 2009).

Ecosystem healthiness, which is comprised of ecosystem productivity, robustness, and expansibility, could be calculated by summing values of healthiness indexes across all of the business ecosystem members. That is, without overall healthiness of ecosystem members or ecosystem in general, sustainable growth of the leading company would be very unlikely. Ecosystem productivity requires enhancing value-adding activity of each individual. To improve this productivity, leading company or business ecosystem itself should simplify tasks that link ecosystem members from one another or enhance efficiency of the new product creation process of each member.
Ecosystem productivity comprises market responsiveness of new products, operational efficiency of member companies, and connection efficiencies. Market responsiveness is the degree to which customers show positive responses to buy a platform product and its related products. Operational efficiency refers to the ability to reduce costs through continuous improvement and constant cost innovations. Connection efficiency is the degree to which value-adding R&D activities and derivative NPDs are conducted due to efficient linkages between a platform and ecosystem members.

Ecosystem robustness indicates the degree to which the ecosystem keep and increase members despite environmental changes. The leader in a business ecosystem can enhance ecosystem robustness by consistently incorporating technological innovations and by providing a reliable point of reference that helps participants respond to new and uncertain conditions. Ecosystem robustness can be evaluated by comparing number of entrants with number of death or exits. Entrants into a business ecosystem strengthen robustness. On the other hand, increasing number of exit companies weakens the stability of the business ecosystem.

Ecosystem expansibility is the ability of an ecosystem to identify and extend new business opportunities. Large leading company must be able to extend the boundary of its business ecosystem by pioneering new areas through new combinations and securing resultant niches. It also has to be open-minded for open
innovation that can absorb even mutant resources. Ecosystem expansibility can be determined by calculating number of niche creating products and niche creators. The more the number of derivative products and/or new products are, the more partners enter the system to cultivate niche markets; thus, the higher is the level of ecosystem robustness.

III. ECOSYSTEM INEQUALITY

Indexes of ecosystem healthiness, that is productivity, robustness, and expansibility, can be classified into a necessary condition and sufficient conditions for the healthiness of business ecosystem. Among ecosystem indices, productivity is a necessary condition. Robustness is a (short-term) sufficient condition, and expansibility is a long-term sufficient condition for the ecosystem healthiness.

First, productivity represents the healthiness of each individual. Each firm must continuously show satisfactory advancements in operational efficiency (ability to improve continuously and reduce costs), output efficiency (ability to transform inputs into outputs), and connection efficiency (joint R&D, order-to-make, etc.)

Second, robustness is a sufficient condition because it is the ability to cope with environmental changes by continuously introducing state-of-the-art products. This robustness is a continuous improvement in the existing business domain. But for
a business ecosystem to grow continuously for a long time, it has to be able to extend into a new area.

Therefore, we can see the expansibility condition for the ecosystem existence as a long-term sufficient condition. Through innovation, that is a new combination, ecosystem members create new areas and; therefore, extended boundaries of ecosystem. For this, continuous inter-sectoral interaction and openness are necessary.

Generally, three indicators of ecosystem healthiness are equally important but the importance of each dimension will change dependent on the growth stage of SMEs or levels of cooperation between SMEs and large corporations. When there is nearly no cooperative relationship, productivity is most important in the evaluation of business-to-business trade relationship. On the other hand, when the relationship continues for a long time, the focus moves from price and/or cost to stable supply chain and innovative idea creation, for which technology and R&D capability and therefore robustness and expansibility become important.

If we divide the developmental stages of a business ecosystem into three stages of 'low', 'medium', and 'high', in the first stage, the business ecosystem needs just productivity to survive. As the ecosystem progresses to the second stage, it will need robustness as well as productivity. In the third stage, all sub-dimensions of business ecosystem healthiness will be necessary. Therefore, relative importance of
each sub-dimension changes as business ecosystem moves through each stage so that at the 'high' stage, the relationship will be expansibility > robustness > productivity, which we call 'ecosystem inequality'. As for growing and evolving business ecosystem, ecosystem inequality suggests that robustness should be higher than productivity and expansibility must be higher than robustness. While productivity is a necessary condition, robustness is a sufficient condition, which comes from external competition or externality drive. This condition helps ecosystem to maintain profitability for survival. Finally, expansibility is a long-term necessary condition for ecosystem to gain profit for continuous growth.

IV. EMPIRICAL STUDY

In order to draw an ecosystem inequality formula, we examined through an empirical study how indexes of ecosystem healthiness influence performance of member firms. We surveyed (non-equity) 143 vertical buyer-seller relationships in the automobile, electronics, steel, and telecommunication industries. Most responses were from first-tier suppliers.

We developed measurement scales to operationalize ecosystem healthiness based on the work of Iansiti and Levien (2004). Table 1 illustrates the measurement items and the result of ANOVA analysis.
To test the relative importance of each index, this study classified respondent firms into three groups according to the level of operating profit: (1) group with profit < 4.0%, (2) group with profit ranging from 4.0% to 8.0%, (3) group with profit > 8.0%. As implied in the theoretical explanation and hypotheses building, we assume non-linear relationship between ecosystem indexes and firm performance. Therefore, we tested differences between groups using ANOVA instead of regression analysis.

Table 1. Ecosystem Healthiness and Performance

<table>
<thead>
<tr>
<th></th>
<th>Operating Profit</th>
<th>F</th>
<th>p-value</th>
<th>Post-hoc test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 4%</td>
<td>4%-8%</td>
<td>&gt; 8%</td>
<td>Total</td>
</tr>
<tr>
<td>Cases</td>
<td>39</td>
<td>32</td>
<td>39</td>
<td>110</td>
</tr>
<tr>
<td>X1. Productivity is high</td>
<td>3.79</td>
<td>3.63</td>
<td>3.69</td>
<td>3.71</td>
</tr>
<tr>
<td>compared to other industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X2. Profitability is high</td>
<td>3.26</td>
<td>3.41</td>
<td>3.49</td>
<td>3.38</td>
</tr>
<tr>
<td>compared to other industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity (X1+X2)/2</td>
<td>3.53</td>
<td>3.52</td>
<td>3.59</td>
<td>3.55</td>
</tr>
<tr>
<td>alpha=.698; r=.537(p=.000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X3. Many firms enter this</td>
<td>3.10</td>
<td>3.50</td>
<td>3.95</td>
<td>3.52</td>
</tr>
<tr>
<td>industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or exit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robustness (X3/X4)*100</td>
<td>108.68</td>
<td>126.20</td>
<td>129.53</td>
<td>121.17</td>
</tr>
<tr>
<td>alpha=.571; r=.399(p=.000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robustness LOG(X3/X4)</td>
<td>1.96</td>
<td>2.05</td>
<td>2.03</td>
<td>2.01</td>
</tr>
<tr>
<td>X5. In this industry new</td>
<td>4.28</td>
<td>4.63</td>
<td>5.10</td>
<td>4.67</td>
</tr>
</tbody>
</table>
First, there was no significant difference in productivity among three levels of operating profit. From this result, we can infer that ecosystem productivity does not necessarily improve profitability of a firm. If productivity is low, a company cannot
survive, which indicates that productivity is a necessary condition for healthy business ecosystem.

Figure 2. Robustness and Performance

Second, robustness seems to be different among groups; although, only a degree of entry was statistically significant. As ecosystem robustness becomes higher, competition grows and bankruptcy ratio rises. From Figure 2, we can find kinked point in which robustness contributes to profitability to a certain level, but beyond that level, robustness does not contribute to performance anymore.
Therefore, robustness plays a role as short-term sufficient condition for the survival of an ecosystem.

Figure 3. Expansibility and Performance

Finally, expansibility seems to contribute to the performance. Expansibility values were different among groups although post-hoc tests were not significant. We also found a kinked point in the relationship between expansibility and operating profit. This kinked point suggests that expansibility contributes to performance only after operating income arrives at medium level.

V. DISCUSSION
Empirical study found that ecosystem productivity was not related with the operating profit of an individual firm but robustness and niche creation significantly influenced the operating profit. However, in the case of robustness, different effects were found depending on its sub-dimensions.

From Figures 1, 2, and 3, we drew overall patterns like figure 4. The Figure supports ecosystem inequality. First, productivity slightly varies across levels of operating profits. Second, robustness differs between low and medium groups. These two findings suggest that, in terms of relative importance, productivity becomes less significant than robustness. Third, between medium and high groups, robustness only slightly increases but expansibility changes upwards. Therefore, in terms of relative importance, robustness is less than expansibility. Thus, we confirmed the ecosystem inequality.

Figure 4. Ecosystem Inequality
Based on the model and its empirical validation, this paper provides managerial implications for policy makers, SMEs, and the supply chain management of large firms.

Empirical findings suggest that for its healthiness, business ecosystem needs more than just productivity and/or profitability. When it comes to issues about cooperation between SMEs and large corporations, there are much talks on low and ever decreasing profitability of SMEs. If we judge the healthiness of a business ecosystem just based on productivity and profitability, it is very likely that we might see cooperation between large and small businesses as conflicting relationship, which is a short-term perspective.

To maintain long-term view, we also have to check if robustness is increasing in the ecosystem. If a vertical business ecosystem is healthy, suppliers must have resistance to environmental turbulence and should be willing to maintain business against all odds. High robustness means that the firm is armed with high level of entrepreneurial willingness and expert knowhow. A business ecosystem must revitalize its entrepreneurship to recover its healthy condition. For this, SMEs must make a specialized expert company. Also if an ecosystem want to maintain its healthiness, it must have convergence-based competitive power, which raises ecosystem expansibility.
As for declining business ecosystem, robustness is higher than expansibility and productivity is greater than robustness. By contrast, as for growing business ecosystem, expansibility is greater than robustness and robustness is greater than productivity. Thus, robustness and expansibility are critical to the healthy business ecosystem.

This study failed to detail an empirical evidence concerning 'ecosystem inequality.' But we could catch an overall pattern, which must be a basis for future researches. More elaboration is needed for the measurement model. Finally, using company reports will be very helpful for measuring the healthiness of an ecosystem.

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The Healthiness of Business Ecosystem and its Effect on SME's Performance

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This paper study SMEs' cooperation with large firms from business ecosystem's perspective. A company is a part of a business ecosystem that crosses a variety of industries. The healthiness of this ecosystem is critical to the success of the company.

This study extends Iansiti and Levien's (2004) study and proposes 'ecosystem inequality'. Among ecosystem indices, productivity is a necessary condition, robustness is a short-term sufficient condition, and expansibility is a long-term sufficient condition for the ecosystem healthiness. Ecosystem inequality suggests that in the healthy and superior ecosystem robustness should be higher than productivity and expansibility must be higher than robustness.

Keywords: Business ecosystem, Large and small business cooperation, Healthiness, Productivity, Robustness, Expansibility

I. INTRODUCTION

Recently, Korean government formulated and executed many policies for vitalizing SMEs by promoting their cooperation with large firms (mainly vertical buyer-supplier cooperation). These policies, however, focused mainly on economic performance of individual firms and also the lack of strategic and network approach. To overcome this limitation, this study tries to explain performance of individual firm from the perspective of business ecosystem. Business ecosystem is defined as "loose networks of suppliers, distributors, outsourcing firms, makers of related products or services, technology providers, and a host of other organizations, which affect, and are affected by, the creation and delivery of a
company's own offerings" (Iansiti and Levien 2004b). Loose networks imply that we must consider loose-tie networks (e.g., third-tier networks, potential suppliers from same or different industries) as well as strong-tie networks (e.g., first-tier suppliers) (Song, Kim, and Rhee 2009).

A company is not only a member of a single industry but also a part of a business ecosystem that crosses a variety of industries. For example, Apple Computer is the leader of an ecosystem that crosses at least four major industries: personal computers, consumer electronics, information, and communications. In a business ecosystem, companies co-evolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations (Moore 1993). Therefore, the performance of a firm is derived from something that is much larger than the companies themselves: the success of their respective business ecosystems.

The leader in a business ecosystem can increase ecosystem productivity by simplifying the complex task of connecting network participants to one another or by making the creation of new products by third parties more efficient. It enhances the robustness of an ecosystem by consistently incorporating technological innovations and by providing a reliable point of reference that helps participants respond to new and uncertain conditions, and encourage ecosystem expansibility (niche creation) by offering innovative technologies to a variety of third-party organizations (Iansiti and Levien 2004b). The leader can realize these ecosystem goals by providing so-called platforms for ecosystem members. A platform is a set of solutions to problems that is made available to the members of the ecosystem through a set of access points and interfaces (Iansiti and Levien 2004a). Ecosystem participants use this
platform to build its own offerings. Therefore a platform is a "package of resources" wherein a leader company shares values with its ecosystems and/or other members (Kim & Song, 2008). Apple's iPod is creating a myth of the 21st Century through the externality of a network created based on platform leadership (Kim 2009).

This study extends the findings of Iansiti and Levien (2004a, b). First, the success of SMEs' cooperation with large firms might be dependent partly on whether their business ecosystem is healthy or not. Thus, we tested whether the healthiness of a business ecosystem affect the performance of SMEs through collecting data from Korean suppliers. Second, this study explores whether and how each of the ecosystem indexes contributes to business performances differently over the developmental stages of a firm. This study built a model that explains the process in which the operating profit of SMEs is determined by the healthiness of a business ecosystem: productivity, robustness (stability), and niche creation (expansibility).

II. BUSINESS ECOSYSTEM

Kim (2009) used "flower-honeybees" metaphor to explain how a business ecosystem works. There are two types of interaction between a flower-the platform-and honeybees-ecosystem members. The first type of interaction is when honeybees focus on making their own honey using the flower. This is similar to the 'standalone' business model where honeybees fly around and use flowers to create their own honey and sell the honey to earn money. The second type is where the honeybees focus on supplying moisture so that the honeybees and flowers come together for the flowers to produce fruits. This becomes the source of strength that enables fruits to create flowers and evolve into an ecosystem of the
next generation. The platform model can evolve and develop in the long term only when it becomes a model that produces fruits (Kim 2009).

Platform is the core of the business ecosystem approach in expanding and developing mutually beneficial cooperation between small-to medium-sized companies and large corporations. The strength of a platform grows in the market in tandem with an increase in the number of business partners of the platform. This is the same as the relationship between flowers and honeybees. If honeybees suddenly disappear in earth, the ecosystem of the earth will be placed in danger. If the number of honeybees, which help to provide moisture, decreases, in ey dct, the plants will not be able to bear fruit. In cooperative relationship between small-to medium-sized companies and large corporations, large company must play as a platform leader, which is also called the keystone company. Keystone companies lure honeybees through a fragrant flower, while there are others that are not able to attract honeybees due to unavailability of fragrant flowers. Thus, fragrance plays an important role in attracting the honeybees and enhancing the interfaces of the ecosystem.

The healthiness of a business ecosystem can be judged on various sub-dimensions. For a business ecosystem to continuously evolve and develop, the productivity of an ecosystem needs to be increased. In addition, members of the business ecosystem need to stably maintain a certain number of objects, despite environmental changes; thereby, increasing robustness of the ecosystem. Other required factor is ecosystem expansibility (niche creation), where innovative members grab new business opportunities and achieve expansion (Iansiti & Levien 2004; Kim 2009).

Ecosystem healthiness, which is comprised of ecosystem productivity, robustness, and expansibility, could be calculated by summing values of healthiness indexes across all of
the business ecosystem members. That is, without overall healthiness of ecosystem members or ecosystem in general, sustainable growth of the leading company would be very unlikely. Ecosystem productivity requires enhancing value-adding activity of each individual. To improve this productivity, leading company or business ecosystem itself should simplify tasks that link ecosystem members from one another or enhance efficiency of the new product creation process of each member.

Ecosystem productivity comprises market responsiveness of new products, operational efficiency of member companies, and connection efficiencies. Market responsiveness is the degree to which customers show positive responses to buy a platform product and its related products. Operational efficiency refers to the ability to reduce costs through continuous improvement and constant cost innovations. Connection efficiency is the degree to which value-adding R&D activities and derivative NPDs are conducted due to efficient linkages between a platform and ecosystem members.

Ecosystem robustness indicates the degree to which the ecosystem keep and increase members despite environmental changes. The leader in a business ecosystem can enhance ecosystem robustness by consistently incorporating technological innovations and by providing a reliable point of reference that helps participants respond to new and uncertain conditions. Ecosystem robustness can be evaluated by comparing number of entrants with number of death or exits. Entrants into a business ecosystem strengthen robustness. On the other hand, increasing number of exit companies weakens the stability of the business ecosystem.

Ecosystem expansibility is the ability of an ecosystem to identify and extend new business opportunities. Large leading company must be able to extend the boundary of its
business ecosystem by pioneering new areas through new combinations and securing resultant niches. It also has to be open-minded for open innovation that can absorb even mutant resources. Ecosystem expansibility can be determined by calculating number of niche creating products and niche creators. The more the number of derivative products and/or new products are, the more partners enter the system to cultivate niche markets; thus, the higher is the level of ecosystem robustness.

III. ECOSYSTEM INEQUALITY

Indexes of ecosystem healthiness, that is productivity, robustness, and expansibility, can be classified into a necessary condition and sufficient conditions for the healthiness of business ecosystem. Among ecosystem indices, productivity is a necessary condition. Robustness is a (short-term) sufficient condition, and expansibility is a long-term sufficient condition for the ecosystem healthiness.

First, productivity represents the healthiness of each individual. Each firm must continuously show satisfactory advancements in operational efficiency (ability to improve continuously and reduce costs), output efficiency (ability to transform inputs into outputs), and connection efficiency (joint R&D, order-to-make, etc.)

Second, robustness is a sufficient condition because it is the ability to cope with environmental changes by continuously introducing state-of-the-art products. This robustness is a continuous improvement in the existing business domain. But for a business ecosystem to grow continuously for a long time, it has to be able to extend into a new area.

Therefore, we can see the expansibility condition for the ecosystem existence as a long-term sufficient condition. Through innovation, that is a new combination, ecosystem
members create new areas and; therefore, extended boundaries of ecosystem. For this, continuous inter-sectoral interaction and openness are necessary.

Generally, three indicators of ecosystem healthiness are equally important but the importance of each dimension will change dependent on the growth stage of SMEs or levels of cooperation between SMEs and large corporations. When there is nearly no cooperative relationship, productivity is most important in the evaluation of business-to-business trade relationship. On the other hand, when the relationship continues for a long time, the focus moves from price and/or cost to stable supply chain and innovative idea creation, for which technology and R&D capability and therefore robustness and expansibility become important.

If we divide the developmental stages of a business ecosystem into three stages of 'low', 'medium', and 'high', in the first stage, the business ecosystem needs just productivity to survive. As the ecosystem progresses to the second stage, it will need robustness as well as productivity. In the third stage, all sub-dimensions of business ecosystem healthiness will be necessary. Therefore, relative importance of each sub-dimension changes as business ecosystem moves through each stage so that at the 'high' stage, the relationship will be expansibility > robustness > productivity, which we call 'ecosystem inequality'. As for growing and evolving business ecosystem, ecosystem inequality suggests that robustness should be higher than productivity and expansibility must be higher than robustness. While productivity is a necessary condition, robustness is a sufficient condition, which comes from external competition or externality drive. This condition helps ecosystem to maintain profitability for survival. Finally, expansibility is a long-term necessary condition for ecosystem to gain profit for continuous growth.
IV. EMPIRICAL STUDY

In order to draw an ecosystem inequality formula, we examined through an empirical study how indexes of ecosystem healthiness influence performance of member firms. We surveyed (non-equity) 143 vertical buyer-seller relationships in the automobile, electronics, steel, and telecommunication industries. Most responses were from first-tier suppliers.

We developed measurement scales to operationalize ecosystem healthiness based on the work of Iansiti and Levien (2004). Table 1 illustrates the measurement items and the result of ANOVA analysis.

To test the relative importance of each index, this study classified respondent firms into three groups according to the level of operating profit: (1) group with profit < 4.0%, (2) group with profit ranging from 4.0% to 8.0%, (3) group with profit > 8.0%. As implied in the theoretical explanation and hypotheses building, we assume non-linear relationship between ecosystem indexes and firm performance. Therefore, we tested differences between groups using ANOVA instead of regression analysis.

Table 1. Ecosystem Healthiness and Performance

<table>
<thead>
<tr>
<th>Cases</th>
<th>Operating Profit</th>
<th>F</th>
<th>p-value</th>
<th>Post-hoc test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 4%</td>
<td>4%-8%</td>
<td>&gt; 8%</td>
<td>Total</td>
</tr>
<tr>
<td>Cases</td>
<td>39</td>
<td>32</td>
<td>39</td>
<td>110</td>
</tr>
<tr>
<td>X1. Productivity is high compared to other industry</td>
<td>3.79</td>
<td>3.63</td>
<td>3.69</td>
<td>3.71</td>
</tr>
<tr>
<td>X2. Profitability is high compared to other industry</td>
<td>3.26</td>
<td>3.41</td>
<td>3.49</td>
<td>3.38</td>
</tr>
<tr>
<td>Productivity (X1+X2)/2 alpha=.698; r=.537(p=.000)</td>
<td>3.53</td>
<td>3.52</td>
<td>3.59</td>
<td>3.55</td>
</tr>
<tr>
<td>X3. Many firms enter this industry</td>
<td>3.10</td>
<td>3.50</td>
<td>3.95</td>
<td>3.52</td>
</tr>
</tbody>
</table>
First, there was no significant difference in productivity among three levels of operating profit. From this result, we can infer that ecosystem productivity does not necessarily improve profitability of a firm. If productivity is low, a company cannot survive, which indicates that productivity is a necessary condition for healthy business ecosystem.
Second, robustness seems to be different among groups; although, only a degree of entry was statistically significant. As ecosystem robustness becomes higher, competition grows and bankruptcy ratio rises. From Figure 2, we can find kinked point in which robustness contributes to profitability to a certain level, but beyond that level, robustness does not contribute to performance anymore. Therefore, robustness plays a role as short-term sufficient condition for the survival of an ecosystem.
Finally, expansibility seems to contribute to the performance. Expansibility values were different among groups although post-hoc tests were not significant. We also found a kinked point in the relationship between expansibility and operating profit. This kinked point suggests that expansibility contributes to performance only after operating income arrives at medium level.

V. DISCUSSION

Empirical study found that ecosystem productivity was not related with the operating profit of an individual firm but robustness and niche creation significantly influenced the operating profit. However, in the case of robustness, different effects were found depending on its sub-dimensions.

From Figures 1, 2, and 3, we drew overall patterns like figure 4. The Figure supports ecosystem inequality. First, productivity slightly varies across levels of operating profits. Second, robustness differs between low and medium groups. These two findings suggest that,
in terms of relative importance, productivity becomes less significant than robustness. Third, between medium and high groups, robustness only slightly increases but expansibility changes upwards. Therefore, in terms of relative importance, robustness is less than expansibility. Thus, we confirmed the ecosystem inequality.

Figure 4. Ecosystem Inequality

Based on the model and its empirical validation, this paper provides managerial implications for policy makers, SMEs, and the supply chain management of large firms.

Empirical findings suggest that for its healthiness, business ecosystem needs more than just productivity and/or profitability. When it comes to issues about cooperation between SMEs and large corporations, there are much talks on low and ever decreasing profitability of SMEs If we judge the healthiness of a business ecosystem just based on productivity and profitability, it is very likely that we might see cooperation between large and small businesses as conflicting relationship, which is a short-term perspective.

To maintain long-term view, we also have to check if robustness is increasing in the ecosystem. If a vertical business ecosystem is healthy, suppliers must have resistance to
environmental turbulence and should be willing to maintain business against all odds. High robustness means that the firm is armed with high level of entrepreneurial willingness and expert knowhow. A business ecosystem must revitalize its entrepreneurship to recover its healthy condition. For this, SMEs must make a specialized expert company. Also if an ecosystem want to maintain its healthiness, it must have convergence-based competitive power, which raises ecosystem expansibility.

As for declining business ecosystem, robustness is higher than expansibility and productivity is greater than robustness. By contrast, as for growing business ecosystem, expansibility is greater than robustness and robustness is greater than productivity. Thus, robustness and expansibility are critical to the healthy business ecosystem.

This study failed to detail an empirical evidence concerning 'ecosystem inequality.' But we could catch an overall pattern, which must be a basis for future researches. More elaboration is needed for the measurement model. Finally, using company reports will be very helpful for measuring the healthiness of an ecosystem.

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Technical Efficiency of Manufacturing SMEs in a Transitional Economy: Evidence from Vietnam

by Viet Le and Charles Harvie

This paper examines the performance of domestic non-state manufacturing small and medium enterprises (SMEs) in Vietnam. Specifically, it evaluates firm level technical efficiency and identifies the determinants of technical efficiency of these SMEs. The paper uses an econometric approach based on a stochastic frontier production function to analyse 5,204 observations of SMEs from three surveys conducted in 2002, 2005 and 2007. The results from the estimations reveal that manufacturing SMEs in Vietnam have relatively high average technical efficiency ranging from 84.2 percent to 92.5 percent. The paper further examines the factors influencing efficiency. It finds that firm age, size, location, ownership, cooperation with a foreign partner, subcontracting, product innovation, competition, and government assistance are significantly related to technical efficiency, albeit with varying degrees and directions. Exporting does not appear to influence technical efficiency. The paper offers some evidence-based policy recommendations to improve the technical efficiency and competitiveness of manufacturing SMEs.

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Keywords: manufacturing small and medium enterprises, firm performance, technical efficiency, stochastic frontier production function, Vietnam.
Introduction


With the official recognition of the private sector since Đổi Mới, the domestic non-state sector, which is largely made up of small and medium enterprises (SMEs), has experienced considerable growth. Following Đổi Mới, early regulations governing the private sector were adopted since the late 1980s and early 1990s which paved the way for the growth of the sector. The private domestic sector emerged and grew steadily throughout the 1990s. However, from the start of the new century, business registrations in Vietnam really made a jump after the introduction of an innovative and breakthrough Enterprise Law in 2000.

Although the growth in number of enterprise registrations has been strong since 2000, there is little evidence about the quality of that growth in terms of enterprise performance. This paper will evaluate the performance of Vietnamese non-state manufacturing SMEs by estimating their technical efficiency. The paper uses a parametric
approach based on a stochastic frontier production function to analyse data collected from three surveys of manufacturing SMEs in 2002, 2005 and 2007. The paper is structured as follows. The next section presents an overview of the domestic non-state sector with a focus on manufacturing SMEs. Then the data, together with the methodology and econometric models for the estimation of technical efficiency and explanatory variables will be discussed. After that results from the analysis will be presented and discussed in the fourth section. The last section of the paper provides some concluding remarks and identifies several policy recommendations to improve the technical efficiency of manufacturing SMEs in Vietnam.

**Domestic Non-State Manufacturing Sector and SMEs in Vietnam**

Analysts have observed that private sector development and enterprise reform have played a crucial role in the reform of the Vietnamese economy (Harvie, 2004; Hakkala and Kokko, 2007). A dynamic non-state sector with an emphasis on SMEs in Vietnam will be a precondition for attaining the objectives of (1) restructuring and slimming state enterprises (2) job creation and income growth through expanding non-farm employment and income opportunities (3) attaining sustainable economic development (4) improving resource allocation efficiency and productivity growth (5) expanding exports (6) attracting FDI (7) achieving a more equal distribution of income (7) and assisting in rural and regional development (Harvie, 2007).

Vietnamese enterprises consist primarily of small and medium enterprises (SMEs). In Vietnam, an SME was first officially defined in 2001 as an enterprise with fewer than 300 workers or a registered capital of less than 10 billion VND (about US$630,000 at the time). Recently, a new definition for SMEs was introduced to replace the definition in 2001. The new SME definition, which became effective from 20 August 2009, provides a definition for each economic sector. It changes the capital clause from registered capital in the earlier definition to total capital of up to 100 billion VND (about US$ 5.6 million). It
also separates SMEs into micro, small and medium enterprises with different limits for the number of employees and capital (Table 1).

Figure 1 shows the number of new enterprise registrations from 1992 to 2009. After the Company Law and Private Enterprise Law were passed in 1990 and 1991 respectively, registrations of domestic private enterprises increased steadily. Registration increased rapidly in the first few years from a low base in response to the policy changes. However, the annual registration number declined from the mid 1990s. By the end of 1999, a total of 45,000 enterprises had been established. This is a modest number given the size of the population and in comparison to other countries in the region. Between 1992-1999 the private sector grew 24 percent per annum (Steer, 2001:4). Although this growth rate was high, it could be deceptive as it grew from a small starting base.

The gradual transformation of the regulatory and legal framework for private enterprises, the fact that SOEs are politically favoured for generating employment, the import substituting nature of the development strategy and the weak capacity of private management and capital generation all had their influence on the growth of the private sector in the 1990s (Webster, 1999; Webster and Taussig, 1999). The newly emerged non-state SMEs faced several major obstacles in the 1990s including institutional weakness, capital shortage, limited access to markets, technical and management limitations, and unfavourable public attitudes (Le Cong Luyen Viet, 2001).

However, Figure 1 also shows that the growth in registration of new enterprises since 2000 has been strong. This comes as the result of the new Enterprise Law (EL) which became effective in 2000. This important law combined the earlier Company Law and Private Enterprise Law into one law. Thus, it provided the legal framework for all types of domestic private enterprises. The EL contains an important innovation with a principle often referred to as “to register first, then to check” by the business community (World
Bank, 2005). This represents a fundamental shift in the approach and tools with which the government manages enterprises. The EL has also revitalized entrepreneurship and strengthened the trust of investors and entrepreneurs in the reforms and policies initiated by the Government (Vo Tri Thanh and Nguyen Tu Anh, 2006).

Since the introduction of the EL the number of new registrations has increased rapidly. The rapid growth in registrations has been sustained since 2000 (Figure 1). According to statistics from the National Business Information Centre, more than 414,000 enterprises have been established from 2000 to 2009. New business registration during this period has increased by more than nine times the number of registrations for the 1991 - 1999 period.

By any measure SMEs account for a significant share of Vietnamese enterprises. Of the 155,771 formally registered enterprises in operation in 2007, SMEs accounted for 97.4 percent of the total enterprises according to the employee criterion or 84.7 percent according to the registered capital criterion in the definition in 2001 (Table 2).

The manufacturing sector is an important sector as it contributes the most in Vietnam’s GDP. In 2008, the sector accounted for 21.10 percent of total GDP. Table 3 focuses on manufacturing SMEs and shows that they accounted for 91 percent of all manufacturing firms in operation in 2006. Their share increased gradually from 88 percent in 2000. This sector is notable for its ability to create stable jobs and produce for exports.

**Methodology, Econometric Models and Data**

Productivity and efficiency represents the economic aspect of firm performance. Growth in efficiency and productivity is the most important aspect of growth as it focuses on the quality of growth. For this reason theoretical and empirical works on firm performance focus on measuring enterprise productivity and efficiency (Storey, 1990).
Average labour productivity had been used as a measure of efficiency until Farrell (1957) introduced a method to measure efficiency in his seminal paper. Farrell’s efficiency measure contains an efficient production frontier which is the output that a perfectly efficient firm could obtain from any given combination of inputs. The performance of a productive unit will be measured against that efficient frontier (Farrell, 1957:254).

Figure 2 explains Farell’s efficiency measure. With constant returns to scale the isoquant $YY'$ is the efficient production frontier. The isoquant represents the minimum set of inputs per unit of output needed to produce a unit of output. Every package of inputs along the isoquant is considered as technically efficient while any point above it and to the right, such as point $P$, is defined as technically inefficient. The technical efficiency level is represented by $OR/OP$ in Figure 2. Meanwhile allocative efficiency of the producer at point $P$ is given as the ratio of $OS/OR$. In this case the isocost-line $CC'$ reflects the objective of cost minimisation. Thus, $R'$ is the technically and allocatively efficient point. The overall efficiency (which is also called economic efficiency) is equal to $OR/OP \times OS/OR = OS/OP$ (Murillio-Zamorano, 2004).

According to Kalirajan and Shand (1999:152) a measure of technical efficiency in the $i$th firm can be defined as:

$$TE = \frac{Y_i}{Y^*_i}$$

where:

- $Y_i$: Actual output
- $Y^*_i$: Maximum possible output

The above equation is the basic model used for measuring technical efficiency. The actual output is observable in this equation. However, maximum possible output is not
observable and must be estimated. A ratio of one in the above equation would mean that
the firm is technically efficient and operates on the production frontier.

A number of techniques have been developed to estimate this frontier. Several
authors broadly classified them into two main groups: parametric and non-parametric
(Kalirajan and Shand, 1999; Kumbhakar and Lovell, 2003; Murillo-Zamorano, 2004;
Coelli et al., 2005). The parametric method uses an econometric technique by specifying a
stochastic production function which assumes that the error term is composed of two
elements. One is the typical statistical noise which represents randomness. The other
represents technical efficiency which is commonly assumed in the literature to follow a
one-sided distribution (Alvarez and Crespi, 2003; Murillo-Zamorano, 2004).

One the other hand, the non-parametric approach does not distinguish between
technical efficiency and statistical noise. It is, therefore, considered as a non-statistical
technique as the inefficiency scores and the envelopment surface are ‘calculated’ rather
than estimated. The non-parametric approach is often associated with Data Envelopment
Analysis (DEA) which is based on a mathematical programming model to estimate the
optimal level of output conditional on the amount and mix of inputs (Murillo-Zamorano,
2004).

In the context of this study the stochastic frontier approach is most relevant. The
first reason is the ability of the stochastic frontier approach to consider both factors beyond
the control of the firm and firm-specific factors, and hence it is closer to reality. The
second reason is the separation of the random variation of the frontier across firms, the
effects of measurement error and other random shocks from the effect of inefficiency. The
third reason is the ability of the model to analyse the determinants for inefficiency
simultaneously with the estimation of technical efficiency which helps to derive policy
implications.
The stochastic frontier production model was developed independently and simultaneously by Aigner, Lovell and Schmidt (ALS) (1977), Meeusen and Van den Broeck (MB) (1977), and Battese and Corra (1977). In this model there is a composed error term which captures the effects of exogenous shocks beyond the control of the analysed units in addition to incorporating technical inefficiency. Errors in measurement of outputs and observations are also taken into consideration in this model (Kumbhakar and Lovell, 2003; Murillo-Zamorano, 2004).

The generalised functional form in the Cobb-Douglas case of the stochastic production function can be specified as:

\[ Y_i = x_i \beta + (V_i + U_i), \quad i = 1, \ldots, N, \]  

where

- \( Y_i \) is the production (or the logarithm of production) of the \( i \)-th firm;
- \( x_i \) is a \( k \times 1 \) vector of (or transformation of) the input quantities of the \( i \)-th firm;
- \( \beta \) is a vector of unknown parameters;
- \( V_i \) are random variables which are assumed to be independently and identically distributed (\textit{iid}) as \( N(0, \sigma_v^2) \), \(^1\)
- \( U_i \) which are non-negative random variables that are assumed to account for technical inefficiency in production and are often assumed to be \textit{iid}. \([N(0,\sigma_u^2)]\). It is assumed to be half-normal, exponential and truncated from below at zero. \(^2\)

\(^1\) This means that the errors are independently and identically distributed normal random variables with zero means and variances \( \sigma^2 \).
\(^2\) \( U_i \) reflects one-sided deviations of actual output from the maximum level of production due to technical inefficiency. If a firm is fully technically efficient, \( U_i = 0 \), otherwise it will be greater than zero. Thus, it is also called a one-sided error component.
Apart from the input variables, exogenous variables characterizing the environment in which a firm operates and firm-specific characteristics also influence their performance. In an attempt to identify determinants of inefficiency, many empirical studies often involve the estimation of stochastic frontiers, prediction of firm level efficiencies and identification of reasons for the differences in predicted efficiencies between firms in an industry (Kalirajan, 1981; Pitt and Lee, 1981; Hill and Kalirajan, 1993; Burki, 1996; Brada et al., 1997; Chow and Fung, 1997; Burki and Terrell, 1998; Jones et al., 1998; Zheng et al., 1998; Tong, 1999; Lundvall and Battese, 2000; Piesse and Thirtle, 2000; Aw et al., 2001; Aw, 2002; Alvarez and Crespi, 2003; Batra and Tan, 2003; Söderbom and Teal, 2004; Chapelle and Plane, 2005; Fernandes, 2006; Margono and Sharma, 2006; Roudaut, 2006; Yang, 2006; Yang and Chen, 2009).

A single-stage production model was proposed by several authors in 1991 (Kumbhakar et al., 1991; Reifschneider and Stevenson, 1991). In this model the parameters for the inefficiency effects model are jointly estimated with the stochastic frontier model. Battese and Coelli (1995) proposed a model that captures inefficiency effects for panel data based on earlier work by Kumbhakar et al. (1991). For cross-sectional data their model specification is expressed as:

\[ Y_i = x_i \beta + (V_i - U_i) \]  \hspace{1cm} (3)

or, in logarithmic form:

\[ \ln(Y_i) = \beta \ln x_i + U_i - V_i \] \hspace{1cm} (4)

where:

\( \ln(Y_i) \) is the logarithm of the scalar output for the \( i \)-th firm,

\( \beta \) is the vector of unknown parameters to be estimated,
$x_i$ is the vector of value of known functions of input and other explanatory variables associated with the $i$-th firm,

$V_i$ are random errors which are assumed to be iid $N(0, \sigma^2_v)$ and independent of $v_i$.

$U_i$ is non-negative random variables which are assumed to account for technical inefficiency in production and are assumed to be independently distributed as truncations at zero of the $N(\mu, \sigma^2_v)$ distribution;

With the assumption of a linear functional relationship, the mean distribution of $u_i$ is a function of the explanatory variables and can be specified as:

$$\mu_i = z_i \delta$$

where

$z_i$ is a $p \times 1$ vector of variables which may influence the efficiency of a firm;

$\delta$ is an $1 \times p$ vector of unknown parameters to be estimated.

Individual firm technical efficiencies from estimated stochastic frontiers are defined as:

$$TE_i = \frac{Exp(\ln Y_i / u_i, x_i)}{Exp(\ln Y_i / u_i = 0, x_i)} = e^{-u_i}$$

where

$Y_i$ is the production of the $i$-th firm,

$TE_i$ will take a value between zero and one in the stochastic production frontier. It measures the output of the $i$-th firm relative to the output that could be produced by a fully efficient firm using the same vector.

For both the stochastic frontier model and the inefficiency effects model, the maximum likelihood method can be used to estimate the coefficients of the two functions.
simultaneously. This will give consistent estimates of the parameters of the production frontier and the inefficiency effects model. The likelihood function is expressed in terms of the variance parameters of the frontier function:

\[ \sigma^2 = \sigma_v^2 + \sigma_u^2 \quad \text{and} \quad \gamma = \frac{\sigma_u^2}{\sigma^2} \quad (7) \]

where

\[ \sigma_v^2 \] is variance of noise and
\[ \sigma_u^2 \] is variance of inefficiency effects.

If the value of \( \sigma^2 \) is equal to zero, then \( u_i \) is also zero which means the firms are fully efficient. \( \gamma \) has a value between one to zero. If the value of \( \gamma \) is one, the deviations from the frontier are attributed to random error. If it has the value of one, the deviations are due to technical inefficiency.

A software package which is most commonly used in the estimation of stochastic production frontiers in the literature is FRONTIER 4.1 developed by Coelli (1996). The software program carries out three steps of estimation. The first step is Ordinary Least Square (OLS) estimates of the production function. It provides unbiased estimators for all the \( \beta \) except the intercept. The OLS estimates are then used as starting values to estimate the final maximum likelihood model. The second step carries out a two-phase grid search of the value of the likelihood function which is estimated for different values of \( \gamma \) with the \( \beta \) parameters derived in the OLS. The third and final step calculates the final maximum likelihood estimates (MLE) with an iterative Davidon-Fletcher-Powell algorithm. This step uses the values of the \( \beta \)'s from the OLS and the value of \( \gamma \) from the intermediate step as starting values (Coelli, 1996).
There are several choices of functional form for the production frontier. The most common functional forms for the stochastic frontier production function are the Cobb-Douglas production function and the Transcendental-logarithm (Translog) production function. A hypothesis test is conducted to choose the functional form for the stochastic frontier production function:

\[ H^1_0: \beta_3 = \beta_5 = \beta_7 = \beta_8 = b_9 = 0 \]  

(8)

The results of this test as presented in Table 6 reveals that the Translog specification is most appropriate for this study. The Translog stochastic production function can be expressed as follows:

\[
\ln Y_i = \beta_0 + \beta_1 \ln K_i + \beta_2 \ln L_i + \beta_3 \ln ME_i + \beta_4 (\ln K_i)^2 + \beta_5 (\ln L_i)^2 + \beta_6 (\ln ME_i)^2 \\
+ \beta_7 \ln K_i \ln L_i + \beta_8 \ln K_i \ln ME_i + \beta_9 \ln L_i \ln ME_i + V_i + U_i
\]  

(9)

where:

\[ Y_i = \text{Output of firm } i \]
\[ K_i = \text{Value of Capital of firm } i \]
\[ L_i = \text{Labour input of firm } i \]
\[ ME_i = \text{Value of Materials and Energy for firm } i \]
\[ V_i = \text{Random error in which } v_i \sim N(0, \sigma_v^2) \]
\[ U_i = \text{Technical Inefficiency in which } u_i \sim N(\mu_u, \sigma_u^2) \]

The second line of Equation (9) includes the squared terms of the input factors, while the third line expresses the interaction terms among the inputs.

We also model the factors influencing technical inefficiency including the firm-specific and external environment variables as follows:
\[
\begin{align*}
\mu_i &= \delta_0 + \delta_{1}age_i + \delta_{2}size_i + \delta_{3}comp_i \\
&+ \delta_{4}urban_i + \delta_{5}hh_i + \delta_{6}coop \\
&+ \delta_{7}ltd_i + \delta_{8}direx_i + \delta_{9}foreign_i \\
&+ \delta_{10}sub_i + \delta_{11}credit1_i + \delta_{12}land_i \\
&+ \delta_{13}credit2_i + \delta_{14}new_i + \delta_{15}improve_i + \omega_i
\end{align*}
\] (10)

The variables in Equations (9) and (10) and their description are summarised in Table 4.

Two more hypothesis tests need to be conducted for the technical inefficiency effects model as presented in Equation (10). The first hypothesis test is about the absence of technical inefficiency effects. Thus, there is no inefficiency function and no deviation from technical inefficiency. This is equivalent to imposing the restriction specified in the null hypothesis as:

\[
H^2_0: \gamma = \delta_0 = \delta_1 = \delta_2 = \delta_3 = \ldots = \delta_{15} = 0
\] (11)

The second hypothesis tests whether exogenous variables included in Equation (10) have a significant influence upon the degree of technical inefficiency. A test of the null hypothesis for this is:

\[
H^3_0: \delta_1 = \delta_2 = \delta_3 = \ldots = \delta_{15} = 0
\] (12)

This study uses recent firm-level data from three comprehensive and large-scale surveys of Vietnamese small and medium enterprises in 2002, 2005 and 2007. The surveys were carried out by the Vietnamese Institute for Labour Studies and Social Affairs (ILSSA) in Hanoi with the assistance of international counterparts from Sweden and Denmark. The first round of the survey was supported by the Swedish International Development Authority (SIDA) and the remaining ones were assisted by the Danish International Development Agency (DANIDA).

The surveys provide a valuable set of data about private sector SMEs in Vietnam. The surveys were implemented after the important Enterprise Law of 2000 was introduced.
The surveys contain the most comprehensive data about SMEs in Vietnam. Although other surveys have a larger coverage, they do not focus on SMEs\(^3\). In addition, the focus on domestic non-state and manufacturing SMEs in the survey make it the only dataset available about this most important sector for SMEs in Vietnam. The surveys also had coverage in different regions of Vietnam, including urban and rural areas. The sample was stratified to ensure that different types of ownership were represented based on the overall distribution of ownership in the population of domestic non-state enterprises. In total, 6,619 enterprises from different sub-sectors in manufacturing industries were interviewed in the three survey rounds.

From the raw data obtained in the surveys described above, data for analysis is constructed for the small and medium sized domestic non-state manufacturing sector. Enterprises reporting in the survey that they were not in the manufacturing sector are removed from the dataset. Similarly, enterprises with missing values are also removed. After this process has been carried out, the eligible observations for analysis have been reduced to 5,204 with 926 firms in 2002, 2,228 firms in 2005 and 2,050 firms in 2007. A summary of statistics for key variables for each survey year are given in Table 5.

**Results and Discussions**

This section presents results from our analysis using the FRONTIER 4.1 program developed by Coelli (1996). Several hypothesis tests were conducted to identify the appropriate functional form for the stochastic production function in Equations (8) and (9), to test for the presence of technical inefficiency and to test whether the inefficiency effects are a linear function of the explanatory variables according to the hypotheses in Equations (12) and (13).

\(^3\) They include the Industrial Censuses and Business Censuses carried out by the General Statistics Office and Business Environment and Enterprise Productivity Surveys conducted by the World Bank.
Table 6 reports the results of the three hypothesis tests. The first hypothesis test for functional form indicates that the null hypothesis $H_{10}^{'}$ is rejected at the 1 percent level. This means that the Cobb-Douglas production function is not an adequate specification and that the Translog production function should be used. The second hypothesis test confirms that technical inefficiency is present as the null hypothesis ($H_{20}^{''}$ assuming that there is no technical inefficiency) is rejected at the 1 percent significance level. The third hypothesis test indicates that firm-specific and external environment factors jointly have an influence on technical inefficiency as the null hypothesis ($H_{30}^{'''}$ that the explanatory variables do not have any influence on technical inefficiency) is rejected at the 1 percent significance level. This means that the joint effect of the explanatory variables in the technical inefficiency effects model is significant, although the individual effect of some variables could be statistically insignificant.

Table 7 provides a summary of the results from the estimation of the frontier production function with cross-sectional data from three surveys in 2002, 2005 and 2007, under the Translog functional form. The MLE also provides estimates of the variance parameters sigma-squared ($\sigma^2$) and gamma ($\gamma$). The first variance parameter, $\sigma^2$, determines whether there is technical inefficiency or not. If $\sigma^2$ is equal to zero, all firms are fully efficient. If $\sigma^2$ is larger than zero, then all firms are not fully efficient. Table 7 shows that the value of $\sigma^2$ ranges from 0.257 in 2005 to 1.35 in 2002, indicating that all firms in the sample are not fully efficient. In addition, the estimated variance $\sigma^2$ for the three periods are statistically significant at 1 percent, indicating goodness of fit and correctness of the specified distribution assumptions of the composite error term. The second variance parameter, $\gamma$, determines whether all deviations from the frontier are due to random error or technical inefficiency. If $\gamma$ is equal to zero then all deviations from the frontier are caused by random error. If $\gamma$ is equal to one, then all deviations from the frontier are caused by technical inefficiency. Gamma ($\gamma$) is estimated at 0.977, 0.934 and 0.943 for 2002, 2005
and 2007 respectively, and is statistically significant at 1 percent indicating that over 90 percent of the total variation from the frontier is due to technical inefficiency.

The mean technical efficiency for manufacturing SMEs are estimated at 84.3 percent, 92.5 percent, and 92.3 percent in 2002, 2005 and 2007 respectively. These results indicate that manufacturing SMEs in Vietnam can increase the current level of output by 15.7 percent in 2002, by about 7.5 percent in 2005, and by 7.7 percent in 2007 with the same level of inputs. Compared to the mean technical efficiency at around 60 percent to 70 percent of the best practice frontier in developing countries, as reported by Tybout (2000), Vietnamese manufacturing SMEs are quite efficient. Nevertheless, as the technical efficiency of Vietnamese SMEs is estimated with regards to their best practice frontier, it is not possible to conclude that Vietnamese manufacturing SMEs are more efficient than their counterparts in other developing countries.

Estimation of the technical inefficiency effects model is carried out simultaneously with the stochastic production frontier in FRONTIER 4.1. Table 8 provides a summary of the technical inefficiency effects. The discussion that follows is focussed on the sources of inefficiency.

Both firm age and firm size have a significant relationship with technical inefficiency in 2002 and 2007, but for 2005 firm age is found to be insignificant. As these two explanatory variables have a positive sign in the technical inefficiency effects model, they have a negative relationship with technical efficiency. Thus, there is no evidence of learning-by-doing for Vietnamese manufacturing SMEs. There could be some explanation for the results found here. Younger firms can be more efficient due to their new technology and equipment. Young firms can also enter the market with innovative ideas and hence are more efficient. Firm size is found to have a negative relationship with technical efficiency. This is surprising as large firms can benefit from economies of scale and their ability to
access information and technology. In addition, there is the virtuous cycle built-in where more efficient firms will survive and expand. Yet, small firms could benefit from flexibility which allows them to quickly diversify and adjust their activities to become efficient. Hence, evidence from Vietnamese manufacturing SMEs supports the “small is beautiful” view, and the need for policy to encourage the development of SMEs.

Competition is found to have no significant impact upon technical efficiency in both the 2002 and 2005 surveys, although it is significant and has a negative relationship to the technical inefficiency of manufacturing SMEs in the 2007 survey. This is supported in the literature as competition is generally believed to have a positive impact on efficiency, as it induces a disciplined performance and exit for loss-making firms. A study by Ito (2006) found that market competition is a significant factor in promoting efficiency in rural firms in China.

Results summarised in Table 8 indicate that manufacturing SMEs in urban centres had lower technical efficiency in 2005 compared to their counterparts in rural areas. The most notable issue for urban enterprises is higher costs for land and labour and space constraints for expansion, which have the potential to negatively affect their efficiency performance. However, the location of firms was found to be insignificant for both the 2002 and 2007 surveys.

In term of ownership structure and efficiency, household enterprises and collectively-owned firms are found to be more efficient than other types of ownership among the non-state domestic sector. However, this is only the case in 2007 and in 2005 for collectively-owned enterprises. There is no difference in efficiency among different types of enterprises in the 2002 survey. This suggests that the owner-manager nature of household business could ensure that they responsibly carry out business activities and have different cost-cutting measures including the use of family labour resulting in higher
efficiency. At the same time, household enterprises benefit directly from efficiency gains. For the case of collectively owned firms it is not clear why they are more efficient than firms with other types of ownership. The surprising result is that the more modern types of enterprises, including limited liability companies and joint-stock companies, despite having a better structure of corporate governance, have lower technical efficiency.

A portion of Vietnamese manufacturing firms have sub-contracting and co-operation arrangements with foreign partners. These two explanatory variables are examined in the technical inefficiency effects model. When they are statistically significant, except 2002 for co-operation and 2005 for sub-contracting, they are found to have a positive relationship with technical inefficiency, as shown in Table 8. By entering into a sub-contracting or co-operation arrangement, SMEs have to follow the terms and conditions of the arrangement and it will limit flexibility and innovation and hence their efficiency performance. There is no evidence of technology transfer from the sub-contracting and co-operation arrangements that benefits the efficiency performance of Vietnamese manufacturing SMEs.

Result from the analysis indicates that direct exporting does not exert a significant impact on the technical efficiency of Vietnamese manufacturing SMEs. Thus, there is no evidence for both self-selection of more efficient firms into exporting and learning-from-exporting hypotheses. The insignificant relationship between exporting and technical efficiency has also been found in previous studies (Brada et. al., 1997; Jones et. al., 1998; Commander and Svejnar, 2007).

Government assistance to firms for land and premises when they start their business and credit during their operations are found to have a significant negative relationship with the technical efficiency of Vietnamese manufacturing SMEs. This is consistent for all the three surveys with the exception of government credit in the 2005 survey. This finding
casts doubt on the effectiveness of government support in providing easy access to land and credit to SMEs. Businesses can take advantage of government support to secure land and credit and use them for other purposes, but not for productive activities. Only government credit for businesses at the time of establishment is found to have a positive impact on efficiency. However, this is the case for the 2002 survey only, and it is only statistically significant at the 10 percent level.

Results also show that manufacturing SMEs with major product improvements tend to have higher technical efficiency than those without product improvement. This is evidenced by a negative and significant relationship between product improvement and technical inefficiency for all three surveys as summarised in Table 8. The same is true for product innovation through the introduction of new products for manufacturing SMEs in the 2002 survey, which shows a positive relationship between new product innovation and technical efficiency. Innovation is found to benefit efficiency, productivity and growth in small firms in some studies (Heunks, 1998; Hall et al., 2009). Yet, the relationship between new product innovation and technical efficiency is negative in 2005 and is insignificant in the 2007 survey. There are two possible explanations for this. First, there could be a lagged effect as it may take time before the innovation results in gains in efficiency. The costs involved in innovation could make firms appear less efficient at the beginning. Second, introducing new products could suggest that the firm is already experiencing difficulties and has to make some changes to improve its situation.

**Conclusion and Policy Implications**

This paper addressed the lack of research about the performance of Vietnamese SMEs, as most studies have only focussed on the growth in number of enterprise registrations. In this paper we focussed on examining the technical efficiency performance of domestic non-state manufacturing SMEs in Vietnam, using comprehensive data from large surveys of domestic non-state manufacturing SMEs in 2002, 2005 and 2007. This
study is the first to use this comprehensive dataset to analyse the technical efficiency performance of Vietnamese SMEs. This research also revealed the impact of different firm characteristics and business environments on the technical efficiency performance of Vietnam manufacturing firms in the non-state sector. The research also aimed at providing empirically founded policy recommendations to enhance efficiency and competitiveness of private sector SMEs in Vietnam’s rapidly developing market economy. The findings from this study are useful for both policy-makers and entrepreneurs to promote the extensive and intensive growth of Vietnamese SMEs. At the same time the study may have policy implications for other transitional economies as well as developing countries in the promotion of SMEs.

In this research we used a stochastic frontier production function to estimate their efficiency level and identify sources of efficiency for this important group of SMEs. The results from this analysis show that domestic non-state manufacturing SMEs in Vietnam have mean technical efficiencies of 84.25 percent, 92.55 percent, and 92.34 percent of the best practice frontier in 2002, 2005 and 2007, respectively. Our results indicate that these firms increase their current level of output by almost 15.7 percent in 2002, by about 7.5 percent in 2005 and by 7.7 percent in 2007 with the same level of inputs. Vietnamese non-state manufacturing SMEs have higher mean technical efficiency than manufacturing enterprises in developing countries.

This paper also identified explanatory factors for the inefficiency of Vietnamese SME manufacturing enterprises. These are useful for policy recommendations to improve the technical efficiency and competitiveness of domestic non-state SMEs in Vietnam. Specifically, older and larger manufacturing SMEs are likely to be technically inefficient. This indicates the importance of the Enterprise Law for Vietnam, with its aim of encouraging the establishment of new and technically more efficient private SMEs. Expanded marketisation and competition in domestic markets also appears to have had a
desired impact on efficiency. Although not important in the 2002 and 2005 surveys, competition in the 2007 survey exerted a positive impact on SME manufacturing efficiency and this appeared to be the case irrespective of ownership form. The implementation of an effective and transparent competition policy that establishes a level playing field for all ownership types, therefore, remains a high priority for the country. Manufacturing SME weaknesses remain in terms of their cooperating with foreign partners and their participation in subcontracting. Too many SMEs are involved in simple assembly, low skill, low value adding activities that do not improve their technical efficiency. They need to upgrade their skills and technology so that their future growth, employment generation, competitiveness and efficiency will be improved. Government policies, in general, appear to be ineffective in increasing SME efficiency, particularly those focusing upon the provision of credit and access to land. The provision of finance should be based on solid commercial principles, otherwise it is unlikely to be effective and not produce substantive and sustainable efficiency outcomes. Our results suggest a re-appraisal of government financial assistance policies, including that of start-up assistance, with the aim of identifying how these could be more effectively utilised. Access to land is a major issue for many SMEs, and it is clear that current policies in this regard are adversely impacting upon SME efficiency. Finally, innovation, particularly in the form of improving existing products, is a vital ingredient in improving manufacturing SME technical efficiency. Innovation can add value to SME activities and enhance the benefits from collaboration with foreign partners and subcontracting, and can be improved through more effective targeting of government financial assistance. Consequently, many of the factors impacting SME efficiency, as identified previously, are inter-related, requiring a holistic policy response by government.
Table 1
New Definition for Small and Medium Enterprises in Vietnam

<table>
<thead>
<tr>
<th></th>
<th>Micro Enterprise</th>
<th>Small Enterprises</th>
<th>Medium Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average No. of</td>
<td>Total capital</td>
<td>Average No. of</td>
</tr>
<tr>
<td></td>
<td>Employees</td>
<td></td>
<td>Employees</td>
</tr>
<tr>
<td>Agriculture,</td>
<td>1&lt;10</td>
<td>20 bil. VND</td>
<td>200</td>
</tr>
<tr>
<td>Forestry and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry and</td>
<td>1&lt;10</td>
<td>20 bil. VND</td>
<td>200</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>1&lt;10</td>
<td>10 bil. VND</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: Government’s Decree No. 56/2009/ND-CP

Table 2
Number and Share of Operating SMEs by Size of Capital and Employees

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Enterprises in Operation</td>
<td>42,297</td>
<td>51,680</td>
<td>62,908</td>
<td>72,012</td>
<td>91,756</td>
<td>112,950</td>
<td>131,318</td>
<td>155,771</td>
</tr>
<tr>
<td>Number of SMEs by employees</td>
<td>39,897</td>
<td>49,062</td>
<td>59,831</td>
<td>68,687</td>
<td>88,222</td>
<td>109,338</td>
<td>127,593</td>
<td>151,780</td>
</tr>
<tr>
<td>Share of SMEs by employees (percent)</td>
<td>94.3</td>
<td>94.9</td>
<td>95.1</td>
<td>95.4</td>
<td>96.1</td>
<td>96.8</td>
<td>97.2</td>
<td>97.4</td>
</tr>
<tr>
<td>Number of SMEs by capital</td>
<td>36306</td>
<td>44670</td>
<td>54217</td>
<td>61977</td>
<td>79420</td>
<td>98232</td>
<td>114341</td>
<td>131888</td>
</tr>
<tr>
<td>Share of SMEs by capital (percent)</td>
<td>85.8</td>
<td>86.4</td>
<td>86.2</td>
<td>86.1</td>
<td>86.6</td>
<td>87.0</td>
<td>87.1</td>
<td>84.7</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on Enterprises Census 2000-2008 (General Statistic Office, 2008)
Note: SME in this table is defined as an enterprise with up to 299 employees or registered capital up to VND10 billion, which correspond with the definition applicable before 2001.
Table 3
Manufacturing SMEs in Operation (2000-2006)

<table>
<thead>
<tr>
<th>Manufacturing SME</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing SMEs' share in total manufacturing firms</td>
<td>88%</td>
<td>89%</td>
<td>89%</td>
<td>89%</td>
<td>90%</td>
<td>91%</td>
<td>91%</td>
</tr>
<tr>
<td>9150</td>
<td>10982</td>
<td>13143</td>
<td>15003</td>
<td>18434</td>
<td>21840</td>
<td>24553</td>
<td></td>
</tr>
<tr>
<td>Producing food and beverage</td>
<td>3252</td>
<td>3338</td>
<td>3663</td>
<td>3791</td>
<td>4156</td>
<td>4735</td>
<td>5089</td>
</tr>
<tr>
<td>Manufacture of tobacco products</td>
<td>13</td>
<td>16</td>
<td>12</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Textile</td>
<td>314</td>
<td>391</td>
<td>512</td>
<td>585</td>
<td>713</td>
<td>901</td>
<td>1093</td>
</tr>
<tr>
<td>Manufacture of wearing apparel dressing and dyeing of fur</td>
<td>372</td>
<td>531</td>
<td>680</td>
<td>820</td>
<td>1127</td>
<td>1303</td>
<td>1483</td>
</tr>
<tr>
<td>Tanning, dressing of leather and manufacture of luggage handbags</td>
<td>103</td>
<td>148</td>
<td>181</td>
<td>199</td>
<td>292</td>
<td>364</td>
<td>362</td>
</tr>
<tr>
<td>Wood processing, manufacture of product made from bamboo</td>
<td>695</td>
<td>834</td>
<td>1012</td>
<td>1116</td>
<td>1400</td>
<td>1642</td>
<td>1973</td>
</tr>
<tr>
<td>Manufacture of pulp paper and paperboard</td>
<td>365</td>
<td>461</td>
<td>527</td>
<td>645</td>
<td>779</td>
<td>949</td>
<td>1063</td>
</tr>
<tr>
<td>Publishing, printing and reproduction of recorded media</td>
<td>256</td>
<td>396</td>
<td>551</td>
<td>735</td>
<td>1052</td>
<td>1269</td>
<td>1713</td>
</tr>
<tr>
<td>Manufacture of coke, refined petroleum and nuclear fuel</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>17</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Manufacture of chemicals and chemical products</td>
<td>352</td>
<td>463</td>
<td>570</td>
<td>694</td>
<td>830</td>
<td>999</td>
<td>1158</td>
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<tr>
<td>Manufacture of rubber and plastic products</td>
<td>426</td>
<td>574</td>
<td>756</td>
<td>846</td>
<td>1087</td>
<td>1378</td>
<td>1564</td>
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<tr>
<td>Manufacture of other non-metallic mineral products</td>
<td>983</td>
<td>1088</td>
<td>1143</td>
<td>1197</td>
<td>1436</td>
<td>1594</td>
<td>1690</td>
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<tr>
<td>Manufacture of metal</td>
<td>106</td>
<td>156</td>
<td>209</td>
<td>250</td>
<td>304</td>
<td>389</td>
<td>448</td>
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<tr>
<td>Manufacture of metal products</td>
<td>586</td>
<td>830</td>
<td>1190</td>
<td>1516</td>
<td>2060</td>
<td>2536</td>
<td>2979</td>
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<tr>
<td>Manufacture of machine and other equipment</td>
<td>211</td>
<td>288</td>
<td>363</td>
<td>453</td>
<td>553</td>
<td>653</td>
<td>717</td>
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<tr>
<td>Manufacture of office accounting and computing machinery</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>14</td>
<td>23</td>
<td>22</td>
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<tr>
<td>Manufacture of engines and other electrical equipment</td>
<td>140</td>
<td>168</td>
<td>211</td>
<td>253</td>
<td>339</td>
<td>375</td>
<td>410</td>
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<tr>
<td>Manufacture of radio, television and communicative equipment</td>
<td>72</td>
<td>84</td>
<td>99</td>
<td>118</td>
<td>160</td>
<td>183</td>
<td>191</td>
</tr>
<tr>
<td>Manufacture of medical instrument, accurate instruments, optical instrument and clock</td>
<td>38</td>
<td>40</td>
<td>53</td>
<td>53</td>
<td>68</td>
<td>87</td>
<td>110</td>
</tr>
<tr>
<td>Manufacture of motor vehicles and trailers</td>
<td>163</td>
<td>198</td>
<td>244</td>
<td>231</td>
<td>276</td>
<td>337</td>
<td>218</td>
</tr>
<tr>
<td>Manufacture of other transport</td>
<td>223</td>
<td>279</td>
<td>312</td>
<td>354</td>
<td>399</td>
<td>475</td>
<td>504</td>
</tr>
<tr>
<td>Manufacture of furniture and other products</td>
<td>462</td>
<td>669</td>
<td>817</td>
<td>1082</td>
<td>1312</td>
<td>1583</td>
<td>1652</td>
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<tr>
<td>Recycling</td>
<td>5</td>
<td>13</td>
<td>15</td>
<td>27</td>
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<td>68</td>
</tr>
</tbody>
</table>

Source: Authors' calculation based on Enterprises Census 2000-2007, GSO.
Note: SMEs cut-off point is enterprises with less than 300 employees
### Table 4
### Variables and their Description

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y (lnY)</td>
<td>The output of the firm, proxied by the sales revenue of the firm (the log form of the output)</td>
</tr>
<tr>
<td>K (lnK)</td>
<td>The capital input of the firm, proxied by productive capital (the log form of the capital)</td>
</tr>
<tr>
<td>L (lnL)</td>
<td>The labour input of the firm, proxied by the number wage bill of the firm (the log form of the labour input)</td>
</tr>
<tr>
<td>ME (lnME)</td>
<td>The materials and energy input of the firm, proxied by the costs of materials and energy (the log form of the material and energy input)</td>
</tr>
<tr>
<td>age</td>
<td>Number of years since establishment up to the survey year</td>
</tr>
<tr>
<td>size</td>
<td>Number of wage worker</td>
</tr>
<tr>
<td>comp</td>
<td>Dummy variable indicating if the firm faces competition when</td>
</tr>
<tr>
<td>urban</td>
<td>Dummy variable indicating if the firm is in urban centre when</td>
</tr>
<tr>
<td>hh</td>
<td>Dummy variable indicating if the firm is a household enterprises</td>
</tr>
<tr>
<td>coop</td>
<td>Dummy variable indicating if the firm is a cooperative, collective, or partnership</td>
</tr>
<tr>
<td>ltd</td>
<td>Dummy variable indicating if the firm is a limited liability company, sole proprietorship or joint-stock company</td>
</tr>
<tr>
<td>direx</td>
<td>Dummy variable indicating if the firm is a direct exporter</td>
</tr>
<tr>
<td>foreign</td>
<td>Dummy variable indicating if the firm has long term cooperation with foreign partner</td>
</tr>
<tr>
<td>sub</td>
<td>Dummy variable indicating if the firm is in subcontracting arrangement</td>
</tr>
<tr>
<td>credit1</td>
<td>Dummy variable indicating if the firm has received government assistance in the form of credit at start up</td>
</tr>
<tr>
<td>land</td>
<td>Dummy variable indicating if the firm has received government assistance in the form of land and premise at start-up</td>
</tr>
<tr>
<td>credit2</td>
<td>Dummy variable indicating if the firm has received government assistance in the form of credit during operation</td>
</tr>
<tr>
<td>new</td>
<td>Dummy variable indicating if the firm introduced a new product in the previous two years</td>
</tr>
<tr>
<td>improve</td>
<td>Dummy variable indicating if the firm introduced a major improvement to existing products in the previous two years</td>
</tr>
</tbody>
</table>
Table 5
Summary Statistics for Key Variables (*)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output (Sale Revenue, in thousand dong(##))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>1,763,303</td>
<td>254,670</td>
<td>8,350,001</td>
</tr>
<tr>
<td>2005</td>
<td>3,629,380</td>
<td>480,650</td>
<td>26,821,429</td>
</tr>
<tr>
<td>2007</td>
<td>3,531,711</td>
<td>685,500</td>
<td>1,7807,571</td>
</tr>
<tr>
<td>Capital (Productive Assets, in thousand dong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>2,202,053</td>
<td>524,000</td>
<td>6,542,259</td>
</tr>
<tr>
<td>2005</td>
<td>1,163,823</td>
<td>140,000</td>
<td>8,393,135</td>
</tr>
<tr>
<td>2007</td>
<td>1,536,217</td>
<td>216,500</td>
<td>9,310,467</td>
</tr>
<tr>
<td>Labour cost (Wage bill, in thousand dong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>146,229</td>
<td>42,200</td>
<td>461,174</td>
</tr>
<tr>
<td>2005</td>
<td>272,597</td>
<td>66,000</td>
<td>1,177,103</td>
</tr>
<tr>
<td>2007</td>
<td>312,609</td>
<td>80,000</td>
<td>1,062,771</td>
</tr>
<tr>
<td>Materials and Energy cost (Wage bill, in thousand dong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>1,459,279</td>
<td>152,800</td>
<td>7,812,698</td>
</tr>
<tr>
<td>2005</td>
<td>2,837,305</td>
<td>322,736</td>
<td>2,3498,263</td>
</tr>
<tr>
<td>2007</td>
<td>2,711,202</td>
<td>441,486</td>
<td>1,5183,928</td>
</tr>
<tr>
<td>Firm Size (Number of Wage workers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>15</td>
<td>6</td>
<td>41</td>
</tr>
<tr>
<td>2005</td>
<td>22</td>
<td>7</td>
<td>65</td>
</tr>
<tr>
<td>2007</td>
<td>18</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Firm Age (Year)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2005</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>2007</td>
<td>11</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation
Note: (*) All numbers are rounded
(v) dong is the currency of Vietnam
Table 6
Generalised Log-Likelihood Tests of Hypotheses

<table>
<thead>
<tr>
<th>Year</th>
<th>LR Statistics</th>
<th>$\chi^2_{0.99}$ Statistics</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>141.26</td>
<td>16.81</td>
<td>Reject $H_0^1$</td>
</tr>
<tr>
<td></td>
<td>$\gamma = \delta_0 = \delta_1 = \delta_2 = \delta_3 = ... = \delta_{15} = 0$</td>
<td>589.18</td>
<td>32.77</td>
</tr>
<tr>
<td></td>
<td>$\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = ... = \delta_{15} = 0$</td>
<td>470.42</td>
<td>32.00</td>
</tr>
<tr>
<td>2005</td>
<td>2141.06</td>
<td>16.81</td>
<td>Reject $H_0^1$</td>
</tr>
<tr>
<td></td>
<td>$\gamma = \delta_0 = \delta_1 = \delta_2 = \delta_3 = ... = \delta_{15} = 0$</td>
<td>590.11</td>
<td>32.77</td>
</tr>
<tr>
<td></td>
<td>$\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = ... = \delta_{15} = 0$</td>
<td>502.57</td>
<td>32.00</td>
</tr>
<tr>
<td>2007</td>
<td>940.95</td>
<td>16.81</td>
<td>Reject $H_0^1$</td>
</tr>
<tr>
<td></td>
<td>$\gamma = \delta_0 = \delta_1 = \delta_2 = \delta_3 = ... = \delta_{15} = 0$</td>
<td>933.38</td>
<td>32.77</td>
</tr>
<tr>
<td></td>
<td>$\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = ... = \delta_{15} = 0$</td>
<td>742.92</td>
<td>32.00</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation

Note: (a) The test statistics have a $\chi^2$ distribution with degrees of freedom equal to the difference between the parameters involved in the null and alternative hypothesis
(b) As $\gamma$ takes values between 0 and 1, in $H_0^2$: $\gamma = \delta_0 = \delta_1 = \delta_2 = \delta_3 = ... = \delta_{15} = 0$ the statistic is distributed according to a mixed $\chi^2$ whose critical value is obtained from Kodde and Palm (1986).

Table 7
Estimated Frontier Production Function

<table>
<thead>
<tr>
<th>Year</th>
<th>2002 926 firms</th>
<th>2005 2228 firms</th>
<th>2007 2050 firms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>S.E.</td>
<td>Coeff.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>$\beta_0$</td>
<td>3.0133***</td>
<td>0.3873</td>
</tr>
<tr>
<td>K (Capital)</td>
<td>$\beta_1$</td>
<td>-0.0021</td>
<td>0.0537</td>
</tr>
<tr>
<td>L (Labour)</td>
<td>$\beta_2$</td>
<td>0.3645***</td>
<td>0.0818</td>
</tr>
<tr>
<td>ME (Material &amp; Energy)</td>
<td>$\beta_3$</td>
<td>0.3596***</td>
<td>0.0669</td>
</tr>
<tr>
<td>$K^2$</td>
<td>$\beta_4$</td>
<td>0.0041</td>
<td>0.0033</td>
</tr>
<tr>
<td>$L^2$</td>
<td>$\beta_5$</td>
<td>0.0589***</td>
<td>0.0063</td>
</tr>
<tr>
<td>ME$^2$</td>
<td>$\beta_6$</td>
<td>0.0815***</td>
<td>0.0053</td>
</tr>
<tr>
<td>K*L</td>
<td>$\beta_7$</td>
<td>0.0177**</td>
<td>0.0082</td>
</tr>
<tr>
<td>K*ME</td>
<td>$\beta_8$</td>
<td>-0.0218***</td>
<td>0.0065</td>
</tr>
<tr>
<td>L*ME</td>
<td>$\beta_9$</td>
<td>-0.1307***</td>
<td>0.0095</td>
</tr>
<tr>
<td>Sigma-squared</td>
<td>$\sigma^2$</td>
<td>1.3477***</td>
<td>0.0770</td>
</tr>
<tr>
<td>Gamma</td>
<td>$\gamma$</td>
<td>0.9773***</td>
<td>0.0020</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>&amp; -125.73</td>
<td>879.89</td>
<td>589.67</td>
</tr>
<tr>
<td>Mean TE</td>
<td>&amp; 0.8425</td>
<td>0.9255</td>
<td>0.9234</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation

Note: *, **, *** denote statistical significance at the 0.10, 0.05 and 0.01 level respectively
Table 8
Summary of Technical Inefficiency Effects

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2005</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>+***</td>
<td></td>
<td>-**</td>
</tr>
<tr>
<td>Size</td>
<td>+*</td>
<td>+***</td>
<td>+*</td>
</tr>
<tr>
<td>Competition</td>
<td></td>
<td></td>
<td>-*</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td>+***</td>
</tr>
<tr>
<td>Household Enterprise</td>
<td></td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>Cooperative/Collective/Partnership</td>
<td></td>
<td>-**</td>
<td></td>
</tr>
<tr>
<td>Ltd., Joint-stock Enterprise</td>
<td>+***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Export</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operation w/ Foreign Partner</td>
<td>+***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-contract</td>
<td>+***</td>
<td></td>
<td>+***</td>
</tr>
<tr>
<td>Govt assist-Credit at Start</td>
<td></td>
<td>-*</td>
<td></td>
</tr>
<tr>
<td>Govt assist-Land at Start</td>
<td>+***</td>
<td>+**</td>
<td>-***</td>
</tr>
<tr>
<td>Govt assist-Credit in Operation</td>
<td>+*</td>
<td></td>
<td>-***</td>
</tr>
<tr>
<td>New Product</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Improvement</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

*Source: Authors’ calculation

*Note: *, **, *** denote statistical significance at the 0.10, 0.05 and 0.01 level respectively.

Correlation between explanatory variables and TE is contrary to the signs in the table.
Figure 1

(*): Preliminary data.

Figure 2
Technical and Allocative Efficiency

References


Determinants of Cost Reductions in Vertical Pricing Relationship: Korean Case

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Chang Seok Song
Soongsil University, South Korea

Ki-Chan Kim
The Catholic University of Korea, South Korea

This paper analyzes the determinants of suppliers’ price and tests the hypothesis that market structure plays an essential role in suppliers’ determining their price. To test this hypothesis, the paper uses survey data of more than 1200 Korean firms (over 900 firms in the year 2008 and more than 300 firms in the year 2009). The empirical results show the importance of SME strategy and how it can prevent the cost reduction forced by the big assembler. The paper also discusses whether the government has to interfere to implement the fair pricing between SME’s supplier and big assembler. In the last section, the empirical results will be compared with those from other countries. We will look for common factors or country-specific factors in determining supplier price.

Keywords: SMEs’ supplier pricing, market structure, SMEs’ supplier strategy, determinants of cost reduction

1. Introduction

Products such as airplane, electronics, car, ship, etc. are made by assembling many parts. For example, it is a well known fact that car is made up of 20,000 parts. Most of these parts are supplied by small and medium enterprises (SMEs).

From the cost accounting perspective, the only determinant of suppliers’ price is the cost. However, from broader perspective, there are other determinants of suppliers’ cost such as: market structure, the level of technology, price of materials, patent, wage, the length of long-term relationship, asymmetric bargaining power etc. Under vertical pricing relationship, the most important determinant of price is buyer’s purchasing power. Economic Theory shows that the market structure can also play an important in determining the price. However, this hypothesis has to be tested empirically.

This paper consists of three parts except the introduction. The second section introduce the theory on the supplier price determination based on the market structure of both suppliers and assembly firms

The third section analyzes the determinants of suppliers’ price and tests the hypothesis
that market structure plays an essential role in suppliers’ determining their price. To test this hypothesis, the paper uses survey data of more than 1200 Korean firms (over 900 firms in the year 2008 and more than 300 firms in the year 2009). The empirical results show the importance of SME strategy and how it can prevent the cost reduction forced by the big assembler. The paper also discusses whether the government has to interfere to implement the fair pricing between SME’s supplier and big assembler.

The last section is the conclusion to summarize the results found in the previous section. And the future task will be discussed shortly.

2. **Vertical Pricing Theory**

Supplier’s price based on cost accounting is determined by the same principle. But the supplier price in economics has been analyzed by the buyer power with the vertical pricing relationship.\(^1\) Considering the market structure, vertical pricing determinants depend on the market structure that assembly firms and suppliers compete respectively.

The combination of the market structure of assembly firms with that of suppliers can be classified like Table 1. When the number of assembly firms is combined with that of supplier, it is shown that the situation of market structure consists of at least 7 cases. The imperfect competition theory except perfect competition can be applied to 6 cases. Unlike perfect competition, the supplier pricing in the imperfect competition is indeterminate. If vertical integration between assembly and supplier is not made, the joint profit-maximizing is not held. The parties try to maximize their individual profits, and then the price is indeterminate over a potential broad range.\(^2\)

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Assembly firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>one</td>
<td>few</td>
</tr>
<tr>
<td>one</td>
<td>bilateral monopoly</td>
</tr>
<tr>
<td>few</td>
<td>pure monopsony</td>
</tr>
<tr>
<td>many</td>
<td>pure monopsony</td>
</tr>
</tbody>
</table>

From the perspective of economics, suppliers have to understand how pricing of suppliers’ parts can be determined with both the market structure of supplier and that of assembly firms. Hence suppliers’ price can’t be the sum of costs.

The economic principle which is widely accepted shows in the Figure 1 that suppliers’ price can be located according to the market structure of both supplier and assembly firms. Figure 1 provide the explanation on 5 cases among 7 cases in the Table 1.
The horizontal line and the vertical in Figure 1 are the quantity and the price, respectively. It is assumed that the curve MC, or Sc denotes the marginal cost of monopoly supplier and the supply curve of perfect competition market.

**Figure 1. Vertical Pricing and Market Structure**

Monopsony of consumers rarely occurs, so the demand curve in the above diagram should be seen perfectly competitive market’s demand curve (Dc); it is a derived demand that represent demand for delivery. This kind of derived demand represents the average net value of the product (AVP) of assemblers.

First, when suppliers and assemblers are in a perfectly competitive market, the quantity of the parts (Xc) bought f...

Second scenario is where suppliers monopolize the demand and there are competitive assemblers in the market. In this case, in order to maximize the profit, assemblers will decide to buy quantity Xbm at Pbm. When the demand for the product increases the price increases and MMC, the limiting curve of MC, Sc will set the marginal cost.
Also, since suppliers monopolize the demand, they will also monopolize the market; if the number of production factors increases the number of output increases and this leads to decline in the price. The lower cost from this increase in production is the average price that you can get from the purchase of production factors. Thus, buyers decide their profits based on the AVP curve and MRP. The buyers who maximize the profit will decide on the point where MMC equals MRP and thus, will purchase Xbm at Pbm.

If assemblers monopolize the demand and the market is perfectly competitive, then the purchase will occur at (Xs, Ps). The suppliers (who are monopolists) will set the price for assemblers so that the price equals the marginal output; this is the profit maximization point. Thus, MRP is the demand curve that monopolist assembler faces. Monopolist assembler’s marginal revenue function is MMRP, which is limiting curve of MRP. Thus, monopolist assemblers produce at a point where marginal cost equals MMRP, i.e. at (Xs, Ps).

Fourth, if assembler and suppliers are both monopolists, then price will be determined by the price leadership and price can be anywhere along HL. The price leadership cannot lead to the joint profit maximization; mathematical derivation shows that joint profit maximization occurs at a point where MR=MC. Realistically, only way to accomplish the joint profit maximization is for the two parties to reach an agreement between assemblers and suppliers on X*. However, there isn’t a clear way to mathematically derive P*, so the agreement can be very difficult.

Price shouldn’t go above H; at that point the assemblers won’t be able to generate any profit from the transaction. The price shouldn’t go below L, which is equal to the suppliers AC . Theoretically, the price will be somewhere between H and L, but the exact number cannot be derived. The agreement will have to be reached by two parties on the price and the price will be a point along the HL. In reaching the agreement various tools can be used. Some possible tools can include legal system, win-win management, joint venture, and long-term investment.

The X* is greater than Xsm or Xbm where the assembler or the supplier act as a price leader. Unlike the case of duopoly, consumers can benefit from the cooperation between suppliers and assemblers.

When two monopolists negotiate, the average price of the suppliers and assemblers should be given. However, in reality, this can be very difficult. It can be wiser for assembler to calculate the supplier’s average cost and try to negotiate price around that range.

The four cases are summarized in Table 2, and this specifies the conditions for assemblers to get higher price. The lowest price occurs when assemblers are monopolist and when suppliers are competitors. The second lowest price occurs in a perfectly competitive market or in a joint monopoly.
If suppliers have a stronger negotiation point than the assemblers, then they can get higher price for the good.

Table 2. The level of supplier price dependent on the market structure

<table>
<thead>
<tr>
<th>Supplier price</th>
<th>Price comparison</th>
<th>Market structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pbm</td>
<td>The lowest price</td>
<td>Assembly firm’s monopsony, but few suppliers’ competition</td>
</tr>
<tr>
<td>Pc</td>
<td>The second lowest price (Pbm &lt; Pc)</td>
<td>Both assembly firms and suppliers in the perfect competition</td>
</tr>
<tr>
<td>Psm</td>
<td>The third lowest price (Pb &lt; Pc &lt; Psm)</td>
<td>The number of assembly firm is a few or perfect competition, but supplier monopolist</td>
</tr>
</tbody>
</table>
| HL range       | (1) the range of both less than Pc and larger than Pc exists.  
(2) the range of larger than Ps exists | Bilateral monopoly |

3. Empirical Analysis

(1) Survey Review

In the year 2008, the price of raw materials has been drastically increased in the international market, as shown in the figure 2. The price has been increased 2 or 3 times over several years.

SMEs’ suppliers which get the shock of big price increase in the raw materials can’t absorb the shock without supplier price increase. But suppliers don’t have the bargaining power with big firms to increase the part price. For example, SMES in the casting industry which don’t balance the cost and the benefit, demonstrate the strike to reject the supply of parts and stop producing cast-iron parts. SMES can increase the assembly part price through the strike. This event attracts scholars and policy-makers on studying how the price between supplier and assembly firm is determined.

Table 3 from the survey which has been done by Korea Small Business Institute shows what the fundamental reason of demand for suppliers’ price decrease is. The first factor is the Korean economic structure led by big firms. The second pressing factor is the assembly firms’ demand for cost reduction, which regularly force the supplier to cost down through the efficiency, the economy of size, and learning-by-doing. Thirdly, assembly firms have the dominant position to seek profit. Fourth,
the intense competition among firms in the global market decreases the supplier price. The fifth is the excessive demand for wage increase by big firms’ labor union. Lastly, SMEs are weak in the competency of technology and new product.

Table 3. Fundamental Reason of Demand for Suppliers’ Price decrease

<table>
<thead>
<tr>
<th>Category</th>
<th>frequency</th>
<th>ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>economic structure led by big firms</td>
<td>291</td>
<td>32</td>
</tr>
<tr>
<td>big firms’ demand for the consistent price decrease</td>
<td>234</td>
<td>25.8</td>
</tr>
<tr>
<td>assembly firms’ dominant position to seek profit</td>
<td>145</td>
<td>16</td>
</tr>
<tr>
<td>intense competition among firms in the global market</td>
<td>91</td>
<td>10</td>
</tr>
<tr>
<td>demand for wage increase by big firms’ labor union</td>
<td>59</td>
<td>6.5</td>
</tr>
<tr>
<td>SMEs’ weak competency of technology and new product</td>
<td>55</td>
<td>6.1</td>
</tr>
<tr>
<td>Others</td>
<td>33</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>908</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Sung Il Kim(2008), p.30

The dominant position of big firms in the price bargaining or the economic structure led by big firms has been resolved not only by SMES’ own efforts, but also by the fair trade commission or by the self-recognition on the competitiveness of their firm-related business ecosystem by big firms.

Table 4 gives the information to analyze the relation between supplier competition and supplier price decrease. The level of competition among suppliers has a great influence on the decrease of supplier price.

Table 4. The impact of Suppliers’ Competition on Supplier Price Decrease

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>great</td>
<td>242</td>
<td>26.7</td>
</tr>
<tr>
<td>Large</td>
<td>248</td>
<td>27.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>319</td>
<td>35.1</td>
</tr>
<tr>
<td>Weak</td>
<td>43</td>
<td>4.7</td>
</tr>
<tr>
<td>very weak</td>
<td>56</td>
<td>6.2</td>
</tr>
<tr>
<td>total</td>
<td>908</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Sung Il Kim(2008), p.27

To avoid the pressure of cost reduction caused by the competition among suppliers, suppliers have to attempt to reduce the unfair cut-throat competition among them and short-run profit-seeking, and to increase the competency in technology and in the development and differentiation of new product in the long run by their own efforts.

(2) Statistical Analysis

This paper tries to analyze what factors are statistically important in determining the reduction of suppliers’ price. Sun Il Kim(2008) provides the interesting survey results to explain what factors have influence on the supplier price determination, but not the statistical analysis. Our paper surveyed suppliers to collect the data necessary to analyze suppliers’ price determination in the year 2009. The
survey has been sponsored by the Center of Large-Small firms’ cooperation in the Federation of Korean Large Firms.

Data were collected by on-line survey of suppliers in automobile, electronics, telecommunications, and steel industries. Online survey of SME suppliers was conducted for 2 weeks. The lists were provided by large firms in each industry. Each respondent was asked to answer about the relationships with its biggest buyer.

143 SME suppliers responded and those covered metal and machinery (67 companies, 47.5%), electric/electronic and telecommunications (32 companies, 22.7%). Buyer companies belong to metal and machinery (68 companies, 50.7%), electric/electronic and telecommunications (37 companies, 27.6%).

Average number of employees was 164 people (median=83 people). During 2008 fiscal year, average sales was 43.5 billion won (median=14.3 billion won, $1=1,107 won). Companies averaged 15 years and 6 months in the length of relationship with buyer A (median: 12 years 11 months) and 58.2 percent in the sales portion attributable to buyer A. (median: 61 percent)

Forty seven percent of suppliers surveyed experienced price decrease and 19.4 percent earned price raise. 33.6 percent answered that price did not change for a year.

Table 5 shows the correlation of independent variables with the increment of supplier price ($\triangle SP$).

<table>
<thead>
<tr>
<th>$\triangle SP$</th>
<th>correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>$DS_{MM}$</td>
<td>0.206</td>
<td><strong>0.024</strong></td>
</tr>
<tr>
<td>$DS_{EET}$</td>
<td>-0.362</td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>$DP_{MM}$</td>
<td>0.396</td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>$DP_{EET}$</td>
<td>-0.244</td>
<td><strong>0.008</strong></td>
</tr>
<tr>
<td>PSTP</td>
<td>0.199</td>
<td><strong>0.029</strong></td>
</tr>
<tr>
<td>PSDEP</td>
<td>-0.053</td>
<td>0.558</td>
</tr>
<tr>
<td>PMAR</td>
<td>-0.216</td>
<td><strong>0.017</strong></td>
</tr>
<tr>
<td>SMAR</td>
<td>-0.010</td>
<td>0.920</td>
</tr>
<tr>
<td>FSIZ</td>
<td>-0.105</td>
<td>0.262</td>
</tr>
<tr>
<td>TCH</td>
<td>-0.010</td>
<td>0.920</td>
</tr>
</tbody>
</table>

(Note) $DS_{MM}$ = dummy variable for suppliers in metal and machine Industries, $DS_{EET}$ = dummy variable for suppliers in electric and electronic Industries, $DP_{MM}$ = dummy variable for purchaser in metal and machine Industries, $DP_{EET}$ = dummy variable for purchaser in electric and electronic Industries, PSTP = purchaser-supplier transaction period, PSDEP = the ratio
of sales dependency of suppliers on one purchaser, PMAR = competition of assembly firms, SMAR = number of purchaser, FSIZ = suppliers’ firm size measured by sales. TCH = level of technology.

Table 6. The determinants of Suppliers’ Price Reduction

<table>
<thead>
<tr>
<th>△SP</th>
<th>coefficient</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.6838</td>
<td>0.096</td>
</tr>
<tr>
<td>DS_{MM}</td>
<td>0.052(0.662)</td>
<td>0.662</td>
</tr>
<tr>
<td>DS_{EET}</td>
<td>-0.240</td>
<td>0.066</td>
</tr>
<tr>
<td>DP_{MM}</td>
<td>0.300</td>
<td>0.029</td>
</tr>
<tr>
<td>DP_{EET}</td>
<td>0.143</td>
<td>0.303</td>
</tr>
<tr>
<td>PSLTR</td>
<td>0.085</td>
<td>0.406</td>
</tr>
<tr>
<td>PSDEP</td>
<td>-0.254</td>
<td>0.017</td>
</tr>
<tr>
<td>PMAR</td>
<td>-0.187</td>
<td>0.064</td>
</tr>
<tr>
<td>SMAR</td>
<td>-0.157</td>
<td>0.148</td>
</tr>
<tr>
<td>FSIZ</td>
<td>0.075</td>
<td>0.445</td>
</tr>
<tr>
<td>TCH</td>
<td>-0.175</td>
<td>0.075</td>
</tr>
<tr>
<td>R^2</td>
<td>0.579</td>
<td></td>
</tr>
</tbody>
</table>

(note) R^2 = determinant coefficient

Table 6 shows that supplier's business type and buyer's industry affect degree of price raise significantly. Buyers metal and machinery industry experienced price raise in average compared with other industries and suppliers in electrics, electronics, and telecommunication industries experienced relative price reduction.

Among other variables, supplier's dependence on a buyer (sales portion), competitive intensity, and degree of technical change contributed significantly to the reduction of selling price.

4. Conclusion

References
Scherer, F.M. and D. Ross(1990), Industrial Market Structure and Economic Performance ,Houghton Mifflin Company
Social network of entrepreneurs and its impact of Small Business Growth

Wasanthi Madurapperuma

Abstract

This paper explore the differences and similarities in the composition and structure of entrepreneurial social network at various stages of venture development and explore the impact of entrepreneurs social capital on business performance. Structural embeddedness (i.e. Configuration) of an entrepreneurs’ social network and the relational embeddedness (i.e.-strength) of those relations are considered. Based on 101 entrepreneurs in small retail businesses, this paper presents evidence indicating that different network configuration are associated with the mobilisation of different types of resources and also show different evolutions. Hierarchical regression results shows that after controlling for the most economic factors Strong diversified regular ties play a key role in explaining the business performance. This research contributes a deeper knowledge and understanding of network characteristics of small retail businesses for accessing resources which in turn influence on business performance.

Keywords: Entrepreneurship; Social Networks; Entrepreneurial process; Business performance; Small retail industry

INTRODUCTION

The importance of entrepreneurship to firm health and national economic growth has been widely acknowledged. Concerned government agencies and other supporting institutions have tried to encourage entrepreneurship. Academics have spent endless effort looking into the variables associated with entrepreneurship. Literature on entrepreneurship focuses on the importance of social network as key explanatory factor in the small business growth (Andersson 2000), and several empirical studies suggest that networks facilitate and accelerate new venture development (Holmlund and Kock, 1998). This study enables us to understand how entrepreneurs in similar stages of business development process use their contacts to acquire resources. Wellman (1999) find that social networks have similar properties in different
countries. Recent studies (Hogan, Eggebeen & Cloggs 1993; Silverstein & Waite 1993) studies didn’t describe in any detail the nature of the respondents social networks from which this support emanates (Mutran 1985). This study attempts to explore the social network model of small retail business and explore differences and similarities in the composition of entrepreneurial social networks at various stages of venture development. This paper employs data from two countries, the UK and Sri Lanka, to explore the network model and to study the factors that influence business performance. Despite the high participation by small retail businesses in entrepreneurial activities around the world and awareness of their role in economic development, there is limited academic attention. The rest of the paper is organised as follows; section two reviews the literature of entrepreneurship and social networks; section three gives the methodology of empirical study, section four discusses results and section five concludes.

LITERATURE REVIEW OF ENTREPRENEURSHIP AND SOCIAL NETWORK

Recent entrepreneurship literature has changed from viewing entrepreneur as autonomous and rational decision makers toward viewing entrepreneurs as embedded in social networks (Aldrich & Zimmer 1986; Hoang & Antoncic 2003; O’Donnell 2001). As a reaction to the former atomistic and under- socialized view of the entrepreneur often taken in the psychological perspective (e.g. Brockhaus 1980; Brockhaus 1982; Brockhaus and Horwitz 1986), an increased recognition of the importance of social networks has developed since the mid-eighties. From then, network analysis has been powerful framework for entrepreneurship researchers. Social network have been defined as the set of nodes or actors connected by a social relationship of a specified types (Castilla et al 2000). It is usual to distinguish
between direct ties and indirect ties and to characterise ties using type of interaction such as formal and informal, the intensity of the ties or the content of the relation i.e., types of resources that circulate through it. Literature agrees on the fact that social networks, in diverse ways, provide entrepreneurs with a wide range of valuable resources and help them to achieve their goals (e.g. Hansen 1995; Singh 2000). In the case of small retail entrepreneurship, we advance that the key resources are: information; access to finance; access to skills, knowledge and advice and social legitimacy. It is argued that different network configurations will be associated with the access and mobilization of different types of resources. Differences in network configuration can be introduced by the nature of resources or by stage of firm in the entrepreneurial process (Casson & Giusta 2007; Hite & Hesterly 2001; Larson & Star 1993).

Much attention in entrepreneurship oriented network research has been focussed on Granovetter (1973) strength of weak tie hypotheses. There is an intense debate about more beneficial configuration of social networks for resources mobilisation process. Granovetter (1973) argues that weak ties are more efficient than strong ties in spreading information and that it hence is important to nurture weak ties (Aldrich & Zimmer 1986; Johannison 1987; Burt 1992; Nohira 1992; Aldrich 1999). According to the other authors strong ties are more beneficial, as they generate trust and cooperation between the actors (Ahuja, 2000), facilitating the exchange of high quality information (Gulati, 1998; Van Gennhvizhen, 2008) and of complex (Hansen, 1999) and tacit knowledge (Lundvall, 1993). These network configurations may be particularly advantageous to access scarce resources (Lovas and Sorenson, 2008). Accordingly there may be difference in relative importance of strong and weak ties dependent on the stages of entrepreneurial development process (Greve 1995). However these differences are not tested for in
most studies. This means that it is important to carry out studies with focus on different stages of business development in order to find possible differences in the impact of strong and weak ties have.

The literature also suggests that both in terms of actor composition and in terms of the nature of the relationships (regular Vs non-regular; formal vs. informal; weak vs. strong, networks evolve over time, this evolution obviously influences the access to external resources in terms business development process. According to this context, some authors argue that the stage of the entrepreneurial process influences the network configuration, (Greve and Salaff, 2003; Hite and Hesterly, 2001; Larson and Starr, 1993). However, some authors advocate that network evolution is influenced by some characteristics of actors.

Most studies consider network evolution at sectoral or cluster level (Orsenigo et al, 2001; Owen Smith and Powell, 2004; Powell et al, 2005; Rosenkopf and Padula, 2008; Aldrich and Kim, 2007; Baum et al, 2000; Powell et al., 1999; Sorenson and Stuart, 2001). In this research we are interested in network evolution at firm level and we propose that:

- Different network configurations are associated with the mobilisation of different types of resources;
- Network composition and structure evolve through time (associated to different stages of development).
- Network structure help to sustain business performance.
METHODOLOGY

Method of investigation

This study uses the egocentric network approach to collect information on the respondents’ social contacts. It has already been shown that most studies of small firm networks have employed ego-centered method. Several tasks have to be performed in measuring ego-centred social networks. First the respondents (focal ego) list the name of existing ties via so-called name generator. When all ties (alters) have been identified, the characteristics of the listed alters and the characteristics ties linking egos to alters (such as strength, reciprocity or multiplexity) have been evaluated. The ego is the source that provided all these information. Owing to the complexity of the response tasks-compiling and editing the list of alters, recalling and writing facts about alters, recalling and evaluating characteristics of contacts with each of these alters etc.- data about ego-centred networks is usually collected by face-to-face surveys (Carraasco et al; 2005)

The data for this thesis were collected during the years 2007–8, titled ‘Social Network of Entrepreneurs and its impact on Business growth in the UK and Sri Lanka. The researcher conducted 101 owner-managers of 101 small firms. Descriptive, comparative and Hierarchical regression analysis techniques appropriate for examining the research questions are employed.

Variables and Measures

Independent variable

Business Growth- The measure of business growth (Krauss et al., 2005) asked participants to report their business growth on profit and sales during the past three
years on a 3-point scale. Therefore, we used the following 3 response possibilities: ‘declined’ ‘the same’, ‘increased’. A year-by-year comparison was made for the past three years (2005, 2006, and 2007), resulting in 3 items that were averaged to produce a measure of business growth. This measure is an aggregated index or causal indicator model (Bollen and Lennox 1991; MacCallum and Browne 1993).

Dependent Variable

Social-Demographic variables

Age: A dummy variable taking the value zero if the interviewee is less than 34 years

Gender: A dummy variable taking the value zero if the interviewee is male

Country: A dummy variable taking the value zero if the interviewee is SL

Ethnic status: A dummy variable taking the value zero if the interviewee is belong to the minority ethnic group

Educational level: A dummy variable taking the value zero if the interviewee has higher school qualification

Parents self-employed: a dummy variable taking the value zero if the interviewee’s parent self-employed

Size of the business: a dummy variable taking the value one if the business has more than five employees; zero if the business has less than five employees.

Firms life-time: measured in years

Business expectation: a dummy variable taking the value zero if the interviewee plan to expand the business
**Social network variables**

**Social network size:** We use multiple name-generators to measure the network size of entrepreneurs. We asked open ended questions of the number of people they talked with advisor, financier, business acquaintance and employees during the each venture stages: “with how many people would you estimate you have discussed aspects of pre-start up, start-up and running your own business?” The questions limits the number of people in the network to those with whom they discussed aspects of each venture stages and in this way restrict the reported network size.

**Network diversity:** We calculated the diversity of the firm’s business ties assessing whether interviewee carried, simultaneously, multiple types of ties to external actors. This measure was inspired by Aldrich H et al (1986). We defined network heterogeneity as the probability of randomly choosing people with two different attributes from the possible five attributes. We calculated it as follows

\[
1 - \left\{ \left[ \frac{\text{Family}}{\text{Total}} \right]^2 + \left[ \frac{\text{Friends}}{\text{Total}} \right]^2 + \left[ \frac{\text{Business}}{\text{Total}} \right]^2 + \left[ \frac{\text{Professional}}{\text{Total}} \right]^2 + \left[ \frac{\text{Supporting institutions}}{\text{Total}} \right]^2 \right\}
\]

A heterogeneity score equal to zero indicates a perfectly homogeneous network whereas heterogeneity score approaching one indicating a more heterogeneity network.

**Proportion of Kin:** We measured the proportion of kin members as the number of family members divided by the number of people in each of their network.

**Closeness:** To measure the strength of relations of each type of network, respondents were asked how close they felt with this person. In this study, Responses could be made from four categories: ‘especially close’ (1) ‘close’ (2), ‘less close’ (3), and ‘distant’ (4). Closeness of contacts was the mean closeness of contact with all network members.
Relational Trust: Trust is an important element in defining the strength of relationships, and is essential to sustaining long-term relationships (Rocha 1993). We focus on the concept of relational trust. Five Likert-type items comprise the scale for relational trust. The questions of relational trust was inspired by Moran P (2005); Cook and Wall (1980); Butler (1991). Items are answered on a 5-point scale (anchors: 1 = strongly disagree; 5 = strongly agree).

RESULTS
The characteristics of respondents in terms of entrepreneur and enterprise are exhibited in Table-1 in Appendix. The entrepreneurial characteristic includes the age distribution of the entrepreneurs, male-female distinction, ethnic status, parents self-employed, experience and the educational level of them. These characteristics help to understand the nature of the people who turn themselves into business entrepreneurs. With regard to the age distribution, most entrepreneurs start their entrepreneurial careers between the ages of 25 and 44. In the sample it was found that more than 70 percent of the owners of the enterprises started their business careers between these ages. In terms of entrepreneur’s male-female distinction, it is evident that still the majority of the business owners are male even though there has been significant growth in female enterprises owned by women. We found that 87.1% of the small retailers are males. Almost 80% business owners belong to ethnic minority group. However, nearly half of them immigrated to the UK more than 30 years ago. Survey data reflects that the fact that the entrepreneurs have a good formal education background in these two samples. It is amounted to 57.4%. In addition to these characteristics, previous industry experience is also an important factor of entrepreneurship. It is clear that the majority of the existing business owners have
had some or work experience before they started or inherited their existing business
tventure in the sample.

The enterprise characteristics include size of the business, firm’s life time and their
market expectation. These characteristics help to understand the nature of the retail
business run by the entrepreneur. Majority of small businesses in the sample are small
It is amounted 63.4%. The desire to be ones’ own boss is the primary reason for
starting a business for almost half of all small retail business owners. Another 42% stated
they started their own business to realise a better financial position. 9% started
their own business because they could not find a suitable paid job. Small retail
business owners are focus on the local community market. 87% of market
concentrated in the local community. With regard to expectation, 64.4% business
owners believe that their market percentage in the local market will either increase or
remain in the same while 35.6 of owners don’t foresee a growth in the market share.

Table-2 in Appendix shows the mean and standard deviation of the continuous
variables. The respondents have a mean advisor network size is 2.62, 2.74 and 3.54
ties in pre-start up stage, start up stage and ongoing stage respectively. Correlations
between Network variables are presented in Tables: 13, 14, 15 and 16 in Appendix.
No variables have correlation higher than 0.7 which indicates that there is no problem
of multicollinearity

**Network composition**

In network composition analysis, we are interested in nature, origin and functions of the
network actors as well as in their dynamic through business stages. We try to answer
questions like who are the key actors selected for each entrepreneurial networks. Did network composition change substantially over the business stages? We start the analysis of network composition with general characteristics of the regular contacts (Zone B) and non-regular contacts (Zone C) contacts. Results about those network size and composition are presented in Table 3, 4 and 5. In these tables we present zone-B and zone-C networks mean, max, min and SD values for total number of actor. Table -3 refer to discovery stage, Table 4 start-up and table 5 ongoing business stage.

### Table- 3 Network Size and composition in the pre-start up stage

<table>
<thead>
<tr>
<th>Entrepreneurial Network</th>
<th>Statistics</th>
<th>No of Actors</th>
<th>family</th>
<th>Friends</th>
<th>Business Acquaintance</th>
<th>Professional</th>
<th>Formal Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone B</td>
<td>Mean</td>
<td>5.97</td>
<td>3.77</td>
<td>1.663</td>
<td>.4059</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>9</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>3</td>
<td>2</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.072</td>
<td>.958</td>
<td>.898</td>
<td>.586</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Zone C</td>
<td>Mean</td>
<td>2.168</td>
<td>.594</td>
<td>1.0297</td>
<td>.4752</td>
<td>.000</td>
<td>.0693</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>.00</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.9805</td>
<td>.594</td>
<td>1.0297</td>
<td>.4752</td>
<td>.000</td>
<td>.0693</td>
</tr>
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</table>

### Table-4 Network Size and composition in the start up stage

<table>
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<tr>
<th>Entrepreneurial Network</th>
<th>Statistics</th>
<th>No of Actors</th>
<th>family</th>
<th>Friends</th>
<th>Business Acquaintance</th>
<th>Professional</th>
<th>Formal Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone B</td>
<td>Mean</td>
<td>6.267</td>
<td>4.0396</td>
<td>1.0099</td>
<td>1.0495</td>
<td>.0198</td>
<td>.0396</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.0853</td>
<td>.9047</td>
<td>.7937</td>
<td>.8047</td>
<td>.14001</td>
<td>.1960</td>
</tr>
<tr>
<td>Zone C</td>
<td>Mean</td>
<td>1.881</td>
<td>.4554</td>
<td>.2871</td>
<td>.3564</td>
<td>.099</td>
<td>.911</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Min</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.9411</td>
<td>.6249</td>
<td>.5165</td>
<td>.5212</td>
<td>.3002</td>
<td>.5848</td>
</tr>
</tbody>
</table>

### Table- 5 Network Size and composition in the Ongoing stage

<table>
<thead>
<tr>
<th>Entrepreneurial Network</th>
<th>Statistics</th>
<th>No of Actors</th>
<th>family</th>
<th>Friends</th>
<th>Business Acquaintance</th>
<th>Professional</th>
<th>Formal Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone B</td>
<td>Mean</td>
<td>8.287</td>
<td>3.76</td>
<td>2.36</td>
<td>1.67</td>
<td>.347</td>
<td>.198</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>6</td>
<td>1</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.283</td>
<td>1.031</td>
<td>1.18</td>
<td>.949</td>
<td>.685</td>
<td>.4005</td>
</tr>
<tr>
<td>Zone C</td>
<td>Mean</td>
<td>2.5149</td>
<td>.0099</td>
<td>.683</td>
<td>.4356</td>
<td>.9109</td>
<td>.9901</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.055</td>
<td>.0995</td>
<td>.4017</td>
<td>.6232</td>
<td>.5495</td>
<td>.6999</td>
</tr>
</tbody>
</table>
When we compare zone B and Zone C networks it becomes clear that in firm development process they establish relation with new actor to access resources. We also notice a change in an actor composition of the Zone B, over the business stages. In this stage, family and friends is the key network member. There is an increase in the relative importance of non-family ties. This is related with the alteration of the nature of resources needed at start up and at later development stages. Facilities, financial capital were more pertinent at start up. During this stage, network extended to professionals and formal support institutions followed by business acquaintance. However, their non-regular contacts became more important than the more regular contacts. Apart from that they lacked knowledge about business environments and government requirements, the help of professional service, and up-to-date information concerning the trade. All these were unavoidable if the entrepreneurs were to start and maintain their business. Then the network composition consist more non-regular ties with business acquaintance, professionals and formal institutions. At later stages, the knowledge of local regulations regarding, health and safety and hiring employee was crucial to the success of the business. As well, Firm need to gain access to complementary resources and competence. Thus they need to reinforce relations with Zone C contacts. They also need to gain access to complement assets that support market exploitation thus they will tend to establish relations with zones-C contact. If the entrepreneurs could maintain non-regular ties with professional services, professional bodies and government agencies, the chance of improving the business was greatly enhanced, which is similar to the findings of the study of Granovetter, (1973). These contacts generated more business and obtained services or knowledge to improve the operation, building the company image and goodwill. In order to get a deeper understanding of this evolution, we now turn our attention to selection, looking at each entrepreneurial network.
Selection

Gulati (1995) defined that selection is to the choice of actors and to tie formation between them. Our objective is to get a deeper understanding of entrepreneurs’ selection regarding the network actors. To explore this we analyse each type of network and key actor types. Table 6, 7, 8 and 8 results in values for discovery stage, start up and ongoing stage respectively. It can be concluded, from the observations of those tables, that different entrepreneurial networks have different structure and different evolutions in terms of actor type composition. It reflects different strategies for different types of resources for different stages. It was very common for entrepreneurs to follow such an evolutionary network model to meet the different needs of different stages of entrepreneurship. Entrepreneurial success was secured by using the network adequately. The entrepreneurs had the tendency to spend more time cultivate and developing relationship with the new group of network members of that particular stage rather than maintaining the relationship with the existing group.

Table – 6 Entrepreneurial Network Composition in the Discovery stage

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<th>Formal Institution</th>
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Table – 8  Entrepreneurial Network Composition in the Ongoing stage

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Network structure

The analysis of network structure focuses in the type of ties (relationships) and on their resource contents, as well as in their dynamics through each venture stages. We raise questions like: Do different network types present different configuration in terms of size, density and tie strength? Did network configurations change substantially through business stages? Was such change more manifest in some type of networks than in others?

In Tables 9, 10 and 11 we show some measures for networks structure characterisation, for each entrepreneurial network relevant to pre-start up, start-up and present stage. There we can see data about the number of actors and ties, the mean degree and the network density. From the observation of those tables, we can conclude that different networks have distinct configurations, both at prestart up, start-up and at present moment, and that those configurations show different evolutions.

Table 9—Network structure in the Discovery stage

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### Table – 11  Network structure in the ongoing stage

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<th>Diversity</th>
<th>Kin Composition</th>
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<th>Trust1</th>
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<th>Trust3</th>
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<tr>
<td>Advisor</td>
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<td>3.54</td>
<td>0.739</td>
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<td></td>
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<td>Mean</td>
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<td>0.264</td>
<td>0.605</td>
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<td>2.42</td>
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</tr>
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</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td>SD</td>
<td>0.75</td>
<td>0.0645</td>
<td>0.319</td>
<td>0.439</td>
<td>1.04</td>
<td>0.976</td>
<td>0.966</td>
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<tr>
<td>Business</td>
<td>Mean</td>
<td>2.91</td>
<td>0.588</td>
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<td>2.182</td>
<td>2</td>
<td>1.99</td>
<td>2.25</td>
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<td></td>
<td>Min</td>
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<td></td>
<td></td>
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<td>0.38</td>
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<td>Employee</td>
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<td>2.613</td>
<td>0.518</td>
<td>0.702</td>
<td>1.854</td>
<td>2.22</td>
<td>1.96</td>
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</tr>
<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>0.969</td>
<td>0.273</td>
<td>0.272</td>
<td>0.444</td>
<td>0.5</td>
<td>0.525</td>
<td>1.003</td>
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</tbody>
</table>
Networks and Firm performance

So far we have analyse entrepreneurial networks, assuming that they are valuable for firm performance. Can this be confirmed with our empirical evidence, or do they perverse effects on performance? We have analysed this by using sales growth as an indicator of firm performance. Table 12 reports the impact of social capital variable on sales performance.

Model 1 presents the baseline model. There were no statistically significant effects for age, gender, ethnic-status, work experience, parents self-employed, size of the business and Business expectation. However, education level tended to perform better in financial performance (p<0.05). This was consistent across all models except the Model 6 and 7. Model 2, 3 and 4 examine the impact of the structural elements of social capital on sales performance. Model 2 indicates that neither the relationship between regular ties and sales performance nor the one between non-regular ties and sales performance is supported. Although the direction of both effects are supported – more regular ties and non-regular ties contribute to financial performance- neither is significant.

I tested whether network size impact on financial performance. Network size is among the most investigated structural network variables. It is argued that network size increases entrepreneurs’ performance. Test results shows that all network size variables are positively related to sales performance. However, only Business network size exhibit significant effects on sales performance (p<0.05).
The other authors have suggested that the diversity of network might also be important for business performance. The diversity of entrepreneurial networks is indeed positively related with performance. Business network diversity and employee network diversity has significant positive (p<0.05) influence on sales performance while advisor network diversity and financial network diversity is insignificant although the direction of effect is positive. Moreover, once network diversity variables are accounted for, regular ties exhibit significant effect on sales performance. In sum, entrepreneurs with many regular contacts contribute more than their counterparts to sales performance and lose this advantage as their business and employee network diversity where entrepreneurs receive a boost to their sales performance.

Turning to the relational measures of social capital, the Model 5 test the impact of kin-composition on sales performance and shows a negative relationship. If employee network consists of more kin ties, it negatively and significantly lowers the growth of the firm (p<0.05). However, if financial network consist of more kin ties, it boost the business performance (p<0.05).

The Model 6 reveals that the impact of closeness on sales performance. It shows that the coefficient for the closeness of social network with advisor and employees was significant and positively related to the sales growth of the firm (p<0.05). Closeness with advisors and employee will benefit. However, this relationship is negative for finance and business network and effect is not significant.

The relational trust, on the other hand, displays a marked impact on sales performance. There is a significant impact on relational trust with actors of business
network and employee network on sales performance of the business (p<0.05). The relationship between Relational Trust with actors of advisor and financier network and sales performance is positive, but not significant. The effect remains for both of these measures of relational quality in the full Model (Model 7). Where entrepreneurs have established familiar/close and high trust personal relations with employees, customers and suppliers, they are more likely to be successful entrepreneurs.

Model 6 shows the full Model – again all network diversity variables (except advisor network diversity) and regular contacts are supported. It shows that entrepreneurs who have more diversified regular ties with customer, suppliers, financiers and employees will benefit (p<0.05). This results support the network brokerage argument (Burt (1992).

Likewise, Entrepreneurs, who are very close-familiar and trusted relations with employees, will also benefit. However, entrepreneurs who have many strong kin ties in his/her employee network will lose. On the other hand, entrepreneurs who have trusted relationship with customers, suppliers and other business acquaintances will also benefit. However, they need not to be in very close relationship with these contacts to boost sales performance. Entrepreneurs who are close to and more familiar with their advisors will also benefit. But, they need not be in high trust relationship with these contacts to boost sales performance. This results support the network closure argument (Coleman 1990; Krackhardt 1999).
Table 12: Hierarchical regression of Sales Performance on measures of social capital

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model-1</th>
<th>Model-2</th>
<th>Model-3</th>
<th>Model-4</th>
<th>Model-5</th>
<th>Model-6</th>
<th>Model-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.631</td>
<td>-1.049</td>
<td>0.055</td>
<td>-0.284</td>
<td>0.39</td>
<td>0.414</td>
<td>-1.76</td>
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<td>Age</td>
<td>-0.041</td>
<td>-0.046</td>
<td>-0.11</td>
<td>-0.083</td>
<td>-0.102</td>
<td>-0.15</td>
<td>-0.118</td>
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<td>Gender</td>
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<td>0.039</td>
<td>-0.004</td>
<td>0.034</td>
<td>-0.039</td>
<td>-0.039</td>
<td>-0.054</td>
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<td>Country</td>
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<td>-0.209</td>
<td>-0.096</td>
<td>-0.136</td>
<td>0.038</td>
<td>0.29</td>
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<td>Ethnicity</td>
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<td>0.073</td>
<td>0.086</td>
<td>0.083</td>
<td>0.053</td>
<td>0.014</td>
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<tr>
<td>Work experience</td>
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<td>-0.049</td>
<td>0.095***</td>
<td>-0.09</td>
<td>-0.086</td>
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<td>-0.059</td>
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<td>Education-Level</td>
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<td>0.615*</td>
<td>0.553*</td>
<td>0.499*</td>
<td>0.283</td>
<td>0.09</td>
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<td>Parents Self-employed</td>
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<td>0.041</td>
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<td>-0.325</td>
<td>-0.411</td>
<td>-0.145</td>
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<td>Firms life time</td>
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<td>0.063***</td>
<td>0.052</td>
<td>0.05</td>
<td>0.03</td>
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<td>Regular-Tie</td>
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<td>0.047**</td>
<td>0.001*</td>
<td>0.086**</td>
<td>0.138***</td>
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<tr>
<td>Non-Regular Tie</td>
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<td>Kin-compos-Employee</td>
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<td>0.006</td>
<td>0.088</td>
<td>0.026</td>
<td>0.092</td>
<td>0.091</td>
<td>0.086</td>
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<td>Durbin-Watson</td>
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<td>F-Value</td>
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<td>3.372**</td>
<td>4.16**</td>
<td>6.004**</td>
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</tbody>
</table>

*P<.05;  
**P<.01;  
***P<.001 (Two –tailed Test)
DISCUSSION

Do network matter for growth? The aim of this paper has been to provide insight into the effect of entrepreneurial network on access and mobilisation of resources and ultimately, also on the performance of small retail enterprises. The data allowed us to construct and characterise ego-centred networks for each firm. Given the rich set of information obtained, we managed to construct different networks, which gives us precious information about the way the entrepreneur use their social capital to access and mobilise different kinds of resources which are critical to firm performance and allowing to accessing a better understanding of the network compositions and configurations that are more effective to access to key resources in the retail industry. This contribution is important since previous research has rarely addressed, simultaneously, a variety of resources and relationships.

Social networks are predominantly important for the entrepreneurial managers since they can play a vital role in collecting and synthesizing information (Casson 1997). In this study, we have examined four types of networks that are effectively used by the firms in their search for resources: advisor network, finance network, business network and employee network. We have compared those networks characteristics relevant to each venture stages. The results also point to the fact that different entrepreneurial networks have different compositions and structures. This means that, as we proposed access to different types of resources entail different types of actors and different types of relations. It is also interesting to notice that, regular ties show a tendency to diversify their actor composition as firms evolve.
It can be concluded that this research provides evidence that contributes to on-going debates in the area of social network and entrepreneurship, both at the methodological and empirical levels. At this stage the main contribution regards the development of a methodology that was found offer important insights into the behaviour of small retail entrepreneurs in their search for key resources for firm performance.

This research has a potential limitation. This study was a cross-sectional examination of one economic sector. As such the reported results may be limited in their applicability to other industry sectors. The results obtained in this study contribute to a more in-depth understanding of the ways how small retail entrepreneurs mobilise their personal networks for accessing resources at different stages of firm development and hence for business performance. Further works is needed in order to better explore the results and also to confront them with the extant literature.

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Prof. Mark Casson, PhD supervisor provided valuable comments and suggestions in the course of several conversations on this paper. Dr. Zella King is also greatly acknowledged.
REFERENCES


### APPENDIX

#### Table – 1: Descriptive Statistics for Categorical Variables (N = 101)

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<th>Categorical variables</th>
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<td>&lt;25</td>
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<td>5</td>
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<tr>
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<td>37</td>
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</tr>
<tr>
<td>35-44</td>
<td>39</td>
<td>38.6</td>
</tr>
<tr>
<td>45+</td>
<td>20</td>
<td>19.8</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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</tr>
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<td>Non-ethnic Minority</td>
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<td>21</td>
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<tr>
<td><strong>Education Level</strong></td>
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<tr>
<td>Below A/L</td>
<td>43</td>
<td>42.6</td>
</tr>
<tr>
<td>A/L or Above A/L</td>
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<td>57.4</td>
</tr>
<tr>
<td><strong>Size of the Business</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 5 employees</td>
<td>64</td>
<td>63.4</td>
</tr>
<tr>
<td>5-25 employees</td>
<td>37</td>
<td>36.6</td>
</tr>
<tr>
<td><strong>Parents Self-employed</strong></td>
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</tr>
<tr>
<td>Yes</td>
<td>37</td>
<td>36.6</td>
</tr>
<tr>
<td>No</td>
<td>64</td>
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<tr>
<td><strong>Reason for starting a business</strong></td>
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<tr>
<td>Desire to be one's own boss</td>
<td>53</td>
<td>52.6</td>
</tr>
<tr>
<td>Better financial position</td>
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<td>31.7</td>
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<tr>
<td>Couldn’t find a suitable paid job</td>
<td>9</td>
<td>8.9</td>
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<tr>
<td>Other (Tradition)</td>
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<tr>
<td><strong>Market focus</strong></td>
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<td>Local community</td>
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<td>Mainstream</td>
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<td><strong>Business Plan</strong></td>
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<td>increase or remain the same</td>
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<td>don’t foresee a growth</td>
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</table>
## Table-2: Mean & Standard Deviation of the Continuous Variables

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<th>Continuous Variables</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
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<tbody>
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<td><strong>DISCOVERY STAGE</strong></td>
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<tr>
<td>Advisor Network size</td>
<td>2.62</td>
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<td>101</td>
<td>2.74</td>
<td>0.541</td>
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Source: interview
### Table-13: Correlations and Descriptive Statistics – Advisor Network

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**Significant at the 0.01 level (2-tailed)

*Significant at the 0.05 level (2-tailed)
Table-15: Correlations and Descriptive Statistics - Business network

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### Start-Up stage

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### Ongoing Stage

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N=101

**Significant at the 0.01 level (2-tailed)**

*Significant at the 0.05 level (2-tailed)
### Table 16: Correlations and Descriptive Statistics - Employee Network

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#### Start Up stage

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#### Ongoing Stage

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N = 101

**Significant at the 0.01 level (2-tailed)

*Significant at the 0.05 level (2-tailed)
1. Introduction

Alfred P Sloan, CEO of General Motors in the early part of the 20th Century, recorded his experiences in his now famous book, “My Years with General Motors”(1). He introduced the topic of corporate entrepreneurship as follows:

“My aim was to create an organization in which executives would be no more disadvantaged than if they were operating their own companies”. (paraphrased, p406)

For at least the past 30 years, corporations have attempted to take up Sloan’s challenge by introducing programs to encourage and foster entrepreneurial behaviour while at the same time maintaining successful and profitable businesses using existing products, services and processes. Some companies have done it well such as 3M, Procter and Gamble and a range of High-Tech companies. Some tried and gave up when they faced economic hurdles or changes in corporate direction. Some created a flexible and creative corporate culture and waited for entrepreneurship to occur. Others introduced processes for developing corporate entrepreneurs.

This paper reflects on the work of five entities who explored corporate entrepreneurship development over 30 years. Each of these had a profound influence on the author of this paper as he attempted to develop entrepreneurial behaviour in both large Australian organisations and a small selection of international companies.
The paper commences with a brief comment on the author’s understanding of terms such as innovation, corporate entrepreneurship and corporate venturing. This is followed by an overview of the philosophies and practices of Gifford Pinchot III(2), Rosabeth Moss Kanter(3), The Foresight Group(4), Gary Hamel(5), and Doblin Inc(6). Each of these entities researched, published, lectured and practiced in the arena of corporate entrepreneurship and each has provided significant input to the beliefs and practices of the author of this paper.

The paper provides a listing of some tools and techniques used by the author having learned and adapted from the five entities listed above. It concludes with a selection of short case studies which demonstrate the types of outcomes that might be expected from the application of the tools and techniques identified.

2. Definitional Issues: Innovation and Corporate Entrepreneurship

This author adopts a simplistic view of innovation because complex definitions tend to confuse and obfuscate what is fundamentally a very basic process. During the 1980s, ArthurYoung, a member of the then “big 8” chartered accounting fraternity, used the following definition of innovation in a survey of Chief Executive Officers. They suggested that innovation is “Ideas Implemented Profitably(successfully)”

This author has expanded the ArthurYoung definition as follows:
• **Ideas** are the inventions or creative contributions of scientists, inventors and designers. Ideas exist in great numbers and most business leaders will readily admit that the generation of new ideas is not a problem in most organizations.

• **Implementation** is a human process, not a mechanized system that can be easily defined and replicated. Implementation of new ideas is fraught with ambiguity and uncertainty and thus it requires human effort in experimentation, testing and sharing with other humans. Implementation then requires entrepreneurial behavior in bringing the idea to fruition.

• **Profitability** (or success) with a new innovative idea comes not because the idea is world-shattering or exceptionally unique. Rather, success comes when the innovative entrepreneur or entrepreneurial team exhibits sufficient energy and creative effort to overcome all of the internal and external impediments that are put in the way of any new idea that threatens the status quo.

Innovation and corporate entrepreneurship are two sides of the same coin and each requires the other for successful corporate venturing. The development of corporate entrepreneurs thus, becomes an important ingredient in the process of generating innovative climates in organizations.

3. Philosophies and Practices of Five Developers of Corporate Entrepreneurs

(1) Gifford Pinchot III
Gifford Pinchot, coined the term “Intrapreneur” in the early 1980s to describe intra-corporate entrepreneurs or internal entrepreneurs. Around that time he conducted schools for entrepreneurs and intrapreneurs in the USA.

Pinchot’s philosophies are contained in the following statement:

“The primary secret of the venture capitalists success is revealed in the way they select ventures for investment. They say: “I would rather have a class A entrepreneur with a class B idea than a class A idea with a B class entrepreneur.” They put their faith in choosing the right people and then sticking with them, while many corporate managers would feel uncomfortable with a strategy dependent on trusting the talent, experience and commitment of those implementing it. I believe the primary cause for the lower returns of corporate managers of innovation is their failure to understand the importance of backing the right people – this is their failure to identify, support, and exploit the “intrapreneurs” who drive innovation to successful conclusions.

……..Intrapreneurs, are “the dreamers who do.” In most organizations people are thought to be either dreamers or doers. Both talents are not generally required in the one job. But the trouble with telling the doers not to bother about their dreams is that they dream anyway. When they are blocked from implementing dreams of how to help your company they’re dreaming dreams of revenge. A mind is meant to imagine and then act. It is a terrible thing to split apart the dreamer and the doer.” (7)

The Intrapreneurs 10 Commandments, highlight Pinchots’s views on what intrapreneurs need to do to succeed.

1. Come to work each day willing to be fired
2. Circumvent any orders aimed at stopping your dream
3. Do any job needed to make your project work regardless of your job description
4. Find people to help you
5. Follow your intuition about the people choose and work only with the best
6. Work underground as long as you can – publicity triggers the corporate immune mechanism
7. Never bet on a race unless you are running in it
8. Remember it is easier to ask for forgiveness than for permission
9. Be true to your goals but be realistic about the ways to achieve them
10. Honour your sponsors (8)

Pinchot has firm views on the training of intrapreneurs.

“Training your people in acquiring intrapreneuring skills is as important as knowing whom to hire. Though most people imagine that intrapreneurs are born and not made, we have had good results training intrapreneurs. In our Intrapreneur Schools we ask for volunteers. This way we are training a select group of people who are courageous enough to volunteer for an intrapreneurial role. Training succeeds partly because it gives people permission to use a part of themselves that their supervisors have been trying to beat out of them for quite some time.

…….In addition, most intrapreneurs are missing skills for which training can help. They have some functional abilities which are often technical, and they have been convinced that they really cannot understand some things like accounting or marketing. They
believe that those blind spots keep them from being the general manager of a new idea. They do not have to become excellent at all functions; they just have to understand enough to work easily with others in those fields. In fact, if the idea good, success does not require great sophistication in many disciplines, just a journeyman job that doesn’t overlook the obvious. Training should be structured to build teams and so the whole team should work together while training.”(9)

Pinchot’s, “Intrapreneurs 10 Commandments” highlight his views on what intrapreneurs need to do to succeed.

1. Come to work each day willing to be fired
2. Circumvent any orders aimed at stopping your dream
3. Do any job needed to make your project work regardless of your job description
4. Find people to help you
5. Follow your intuition about the people you choose and work only with the best
6. Work underground as long as you can – publicity triggers the corporate immune mechanism
7. Never bet on a race unless you are running in it
8. Remember it is easier to ask for forgiveness than for permission
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10. Honour your sponsors(10)

Pinchot has firm views on the training of intrapreneurs.
“Training your people in acquiring intrapreneuring skills is as important as knowing whom to hire. Though most people imagine that intrapreneurs are born and not made, we have had good results in training intrapreneurs. In our intrapreneur schools we ask for volunteers. This way we are training a select group of people who are courageous enough to volunteer for an intrapreneurial role. Training succeeds partly because it gives people permission to use a part of themselves that their supervisors have been trying to beat out of them for quite some time.

……In addition, most intrapreneurs are missing skills for which training can help. They have some functional abilities which are often technical, and they have been convinced that they really can’t understand some things like accounting or marketing. They believe that those blind spots keep them from being the general manager of a new idea. They do not have to become excellent at all functions; they just have to understand enough to work easily with others in those fields. In fact, if the idea is good, success does not require great sophistication in many disciplines, just a journeyman job that doesn’t overlook the obvious. Training should be structured to build teams and so the whole team should work together while training.”(11)

Pinchot wrote of his processes and practices in 1999 in a new book entitled Intrapreneuring in Action.(12) The contents to that book provide a useful checklist for intrapreneur developers on what needs to be considered.

1. Make your mistakes faster and cheaper
2. Honouring the five people of innovation
3. Create the climate for innovation
4. Training for intrapreneurs
5. Choosing innovations that fit who you are
6. Getting started
7. Avoiding the classic new product mistakes
8. Intrapreneuring within a structured development process
9. Advice for hands-on innovators
10. What managers can do
11. What senior leaders can do
12. The future of the intrapreneurial organization
13. How to succeed as an intrapreneur

Chapter two of this latest book by Pinchot discusses the **five people of innovation**. Developers of corporate entrepreneurs need to take all of these people into account in their development activities. The five people are;

1. Idea people
2. Intrapreneurs
3. The intrapreneurial team
4. The sponsor (protecting intrapreneurs from the “corporate immune system”)
5. The climate maker (working to create an organizational pattern and culture empowering intrapreneurial teams.)
(2) Rosabeth Moss Kanter

Professor Moss Kanter entered the innovation literature and lecture circuit in 1982 following publication in the Harvard Business Review of an article entitled “The Middle Manager as Innovator.”

In 1983 she published a book entitled “The Change Masters” in which she outlines the importance of corporate entrepreneurs in championing change.

Moss Kanter visited Australia in 1983 and in one conference presentation she outlined her philosophies concerning innovation in bringing about corporate change. Her model for change included:

1. A shared vision
2. A mechanism and a process for managing change
3. Tools for change –
   - Participation in culture change teams
   - Training
   - Information
   - Support
4. Encouragement of localized innovation; widespread micro level change
5. Ensuring 2-way communication within the change process to facilitate the learning and the development of commitment
6. Ensuring signals, rewards and symbols are compatible with the changes sought
7. Realign policies, systems and structures to support the aims of the change processes

The research that Moss Kanter conducted for her book “The Change Masters” identified the following rules for stifling innovation in large organizations:

1. Be suspicious of any new idea from below
2. Insist that ideas go through many levels before reaching the final decision maker
3. Express criticism, withhold praise and instill job insecurity
4. Change policies and reorganize unexpectedly
5. Count everything that can be counted – frequently
6. Never forget that you at the top know everything there is to know that is important about this business(15)

Moss Kanter’s research in large US organizations highlighted 8 characteristics of innovative middle managers which she shared in her Australian visit in 1983:

1. Desire for change and a tolerance for uncertainty (The entrepreneurs disease)
2. Foresight, vision and clarity of direction
3. Thoroughness and complete preparation
4. Political astuteness
5. Participative management style
6. Persuasive
7. Pushes to the limits of his/her discretion
Her research also identified the following characteristics of winning innovations:

1. Trial-able
2. Reversible
3. Divisible
4. consistent with sunk costs
5. Concrete
6. Familiar
7. Congruent with image, goals and values
8. Potentially visible

As a last resort, an innovation may be:

9. Marginal
10. Idiosyncratic

Innovative middle managers have mastered a process of innovating and the following checklist from Moss Kanter provides developers of corporate entrepreneurs with a useful template for training and development programs

1. Definition
   - Sensing and seizing a need
- Broadening perspectives
- Gathering intelligence and planting seeds
- Shape the vision

2. Coalition Building
- Pre Selling
- Horse trading
- Secure blessings
- Form a team

2. Getting Results
- Managing the rest of the organization
- Secondary redesign
- Handling interference and opposition
- Maintain momentum and continuity
- External communication
- Deliver on promises (to team)(16)

(3) The Foresight Group (Sweden)

Gordon McCrae wrote in the Economist magazine in 1982 about the Swedish Foresight Group who had established a School for Intrapreneurs in Europe (4)
The Foresight Group consisted of three well known innovation consultants (Sven Atterhed, Gustaf Delin and Lennart Boksjo) who had been heavily influenced by Gifford Pinchot III. Their philosophies concerning innovation in large corporations are explained as follows:

“Think about the traditional approach to innovation. Management analyses and reviews ten ideas for new projects and chooses one. Money is then poured into the selected project to try and make it work. Everyone becomes blind to the possibility of failure. If the idea falls flat on its face, how much time and money will have been wasted? And even if it succeeds, how many good ideas are left on the shelf unexplored? How many other ideas are lost to the organization?

With intrapreneurship, the same ten projects are given to ten individuals, each of whom is burning to develop new ideas. They are given corporate support, but on a limited scale. Some projects will fail before they reach the finish line, but at minimal cost to the organization. Those that stay the course are by definition winners, since every step from concept to market testing have been carried out –typically in a fraction of the time and cost of traditional projects.”(17)

According to the Foresight Group, the role model intrapreneur is “a self selected employee who has been given the space tools and support needed to act as a fully responsible “free market entrepreneur” using the company’s name, know how and network to turn his/her vision or mission or idea into a profitable and growing business for the corporation.”(18)

The characteristics of the innovation process require entrepreneurs not controllers. These characteristics include:
1. High degree of ambiguity
2. High flexibility needed
3. Quick decisions
4. Many decisions
5. Many mistakes
6. Must learn fast
7. Hostility and suspicion from others
8. Little support
9. Must find sponsors
10. Must prove quickly that it works.(19)

It is clear to see that the Foresight consultants and Gifford Pinchot were of similar minds as far as innovation in corporations is concerned.

The Foresight Group School for Intrapreneur Development is seen as a “Five-Part Process”

1. Direction and commitment declared by senior decision makers to develop innovation and intrapreneurs in the organization
2. Intrapreneurial management and culture development whereby those who will manage intrapreneurs will exhibit encouraging and supportive behaviours
3. Intrapreneur identification and selection takes place through processes of self selection where individuals and teams are invited to hear about the school for
intrapreneurs and then decide for themselves if they wish to put in the effort required.

4. Intrapreneur training over a period of months with 2 and 3 day workshops in which potential intrapreneurs are confronted with the attitudes and skills needed for entrepreneurial behaviour while they test and develop plans for their chosen innovative ventures.

5. Support structures and systems developed to both capture and support the efforts of intrapreneurs but also to ensure that lessons learned are promulgated throughout the culture of the organization to ensure ongoing growth and progress.(20)

**Intrapreneurial skill training** in Foresight Schools include the following:

1. Trend identification
2. Creative idea generation
3. Goal formation - visioning
4. Business idea formulation
5. Business plan creation
6. Articulating and testing critical assumptions
7. Milestone budgeting
8. Seeking sources of funds
9. Presentation skills
10. Telephone skills(21)
The Foresight Group took their School for Intrapreneurs into the world between 1985 and 2005 by creating the Foresight Network, members of which developed many intrapreneurs and intrapreneurial ventures in corporations in Scandinavia, Europe, USA, Australia and New Zealand.

(4) Professor Gary Hamel

Gary Hamel became well known in the early 1990’s following publication of a book entitled “Competing for the Future”, co-authored with CK Prahalad. The authors at that time were arguing that successful companies in the future would not simply need to develop innovative products and services, but that they would need to recreate the industries in which they operated.

By the year 2000, Hamel was convinced that “strategic innovation” was the key to success for the world’s largest companies if they were to continue to operate and to prosper in a period of massive, unprecedented change.

Hamel published a paper in the Harvard Business Review in 1999 entitled “Bringing Silicon Valley Inside.” His introduction to the paper expressed his thinking about innovation as follows:

“Stewardship versus entrepreneurship: that’s the fundamental distinction between the mediocre mass and the revolutionary wealth creators. Stewards polish grandma’s silver –they buff up the assets and capabilities they inherited from entrepreneurs long retired or long dead. Devoid of passion and imagination, they spend their time trying to
unlock wealth by hammering down costs, outsourcing inefficient processes, buying back shares, selling off bad businesses and spinning out good ones. But in the new economy, investors don’t want stewards. They want entrepreneurial heroes-innovators who are obsessed with creating new wealth. Stewards conserve. Entrepreneurs create.

If you want your company to join the pantheon of wealth-creating superstars, you have to shift the balance of effort from stewardship to entrepreneurship in your organization. There’s nothing wrong with stewardship-someone has to safeguard all those brands, skills, assets, and customers that underpin today’s success. But in a world where strategy life cycles are increasingly measured in months, not decades, even the most skilled stewardship won’t enable you to capture tomorrow’s riches. It may not even enable you to survive.”(23)

Hamel published a new book in 2000 entitled “Leading the Revolution.”(5). He conducted an Innovation Academy in USA and Europe to encourage companies to take up the themes developed in that book. During one of these Academies he shared the following:

“Building a deep capacity for strategy innovation requires a company to imbue its employees with new passions, as well as new skills. It requires a never-ending effort to engage and capture the imagination of every single individual. It requires a relentless quest to bring profoundly new benefits to customers. It requires allegiance to new financial measures that focus attention on the challenge of creating new wealth. It requires a relentless search for new business concepts. It requires the total absence of nostalgia for old business concepts.”(24)
Professor Gary Hamel has held academic positions at London and Harvard Business Schools. He also established a consulting company called “Strategos Inc” (25), which assists large international corporations to develop innovative strategies for facing a rapidly changing world. His processes for assisting organizations to develop innovative thinking include:

1. Top level commitment to opportunity oriented thinking
2. Developing mindsets throughout the organization that welcome innovative ideas
3. Executives, managers and team leaders skilled in facilitating teams of idea generators
4. Employees trained in opportunity identification and evaluation (26)

In his book “Leading the Revolution” he lists 10 rules for re-inventing the company which he uses in his processes for developing innovative strategies. These are:

1. Set unreasonable expectations
2. Stretch your business definition
3. Create a cause, not a business
4. Listen to new voices
5. Design an open market for ideas
6. Offer an open market for capital
7. Open up the market for talent
8. Lower the risks of experimentation
9. Make like a cell - divide and divide

10. Pay the innovators well-really well

The above list of rules can be used both for building innovation into corporations, and for creating enduring cultures that recreate the whole corporation. Hamel argues that the culture change exercise needs to precede any thoughts of using the rules for building innovation. However, the rules can be employed independently of each other and have been proven to change the way innovative activity occurs in different parts of an company. One small example is the application of “listening to new voices” in management teams. If a team is prepared to invite people with different backgrounds and experiences to address its members and then to openly discuss the alternative new voices without judgment, the team can often discover new innovative opportunities that would never have occurred to them without the stimulus of the new voices.

Strategos Inc, under Hamel’s leadership introduced an innovation process into a number of international corporations with great effect. This has been known as the “Game Changer Program” and has the following characteristics:

1. Funnel concept. The heart of innovation is the revolutionary idea. Experience shows that a large volume of ideas is needed to generate a few breakthrough opportunities. The Game Changer process promotes proposals to be submitted at any time, from anywhere and from anyone.

2. Speed. Promising ideas should be pursued as quickly as possible. The process is based on speed: once an idea is submitted, a panel of peers rapidly assesses it and
responds. Larger promising ideas are progressed to an Extended Panel for further commerciality screening and potential acceptance for further funding.

3. Fast response. Quick follow-up on good new ideas encourages generation of additional ideas.

4. Funding until proof of concept. Game Changer aims to fund idea development until either proof of concept is reached or it is clear an idea is not (yet) feasible. Emphasis is on demonstrating the potential business impact if the idea had been successfully developed.

5. Hit and run. Small scale or immature, but promising, ideas may immediately receive controlled funding to mature the idea.

6. Review by peers. The funding of an idea as a Game changer and the continuance of a Game Changer project is determined by peer review, and not via traditional line management hierarchies with their inherent obstacles.

7. Opportunity to allocate time to ideas. Staff should have freedom during business hours to allocate time for idea generation.

8. Team orientation. The organization’s culture should encourage fleshing out of ideas by teams if necessary, rather than by individuals. The experiences and networks of team members can be advantageous to the project.

9. Interdisciplinary ideas actively encouraged. Traditional discipline and departmental areas should not be permitted to inhibit idea generation and development. A specific Game Changer team should be established to catch ideas that fall between the cracks of traditional business areas.
10. Ease of submission. Submission forms and the submission process must be simple and fast to use by occasional users.

11. Absence of organizational filters. No approvals (from line managers etc) should be necessary to submit an idea.

12. Rewards and recognition: no penalties. Generation of ideas should be recognized and rewarded appropriately. There must be no penalty for generating ideas not accepted by the viewing process: all contributions should be recognized.

13. Awareness of rewards. Rewards should appropriately compensate time and effort with an eye to potential benefit and all employees should be made aware of available rewards.

14. External awareness. An outward looking culture is necessary via participation in conferences, industry consortia, academia, personal networking, etc. Some global corporations include third parties in their review process to provide an independent perspective.

15. Active promotion of idea generation. Periodic focused workshops are needed for ongoing rejuvenation and stimulation of ideas to constantly fill the “funnel” of submitted ideas. Full-time process champions are essential to success not only in rapidly administering the process but also in visibly signaling organizational commitment to innovation and the future.

16. Database of ideas accessible to all. A database of ideas and their progression should be accessible to all and easy to use. This encourages sharing of new ideas and helps build upon already known submissions.
Doblin Inc, located in Chicago USA, began their operations 30 years ago as “Strategic Design Consultants” believing that corporations should spend their time when developing corporate strategy on “Design Strategy” much more than they spent time on market, production and finance strategies. Unfortunately, corporate strategists who were largely trained in business schools did not perceive design to be a significant issue. When “Innovation” became the catch cry of corporate strategists in the late 1990s and early 2000s, Doblin Inc realized that its approach to strategic design was ideally suited to companies who sought to be innovators in industry strategy and product and service strategies.

They applied the disciplines that they had traditionally used in product design to the innovation projects that they undertook in large corporations.

Doblin philosophies on corporate innovation questioned many of the conventional wisdoms on innovation. For example, they do not accept that innovation comes from a set of excited individuals who are encouraged to think up ideas, find market opportunities for those ideas and then attempt to convince a bureaucratic organization to say yes to their implementation.

Rather, Doblin has adopted a concept of “disciplined innovation” in which outcomes required from the innovation efforts are designed in advance, new discoveries are planned systematically, ethnographic data is collected on potential buyers or users, carefully designed solutions are developed, prototypes are experimented with, and
corporate executives are presented with innovations which match the requirements that they established earlier.

Doblin has also questioned the conventional wisdom that most profitable innovation comes from unique products and services. Their research has uncovered four categories of innovation encompassing 10 types. These are as follows:

Finance:

1. Business model. (How you make money)
2. Networks and alliances. (How you join forces with other companies for mutual benefit)

Processes:

3. Enabling processes. (How you support the company’s core processes and workers)
4. Core process. (How you create and add value to your offerings)

Offerings:

5. Product performance. (How you design your core offerings)
6. Product system. (How you create product systems and platforms)
7. Service. (How you provide value to customers and consumers beyond and around your products)

Delivery:

8. Channel. (How you get your offerings to market)
9. Brand. (How you communicate your offerings)
10. Customer experience. (How your customers feel when they interact with your company and offerings)

Doblin has researched large publicly listed companies in USA over the past 10 years to determine both resource allocation to innovation and where value has been created from innovation. They have discovered that the bulk of resources have been allocated to the “offering” category of innovation whereas the value has been created in the “finance” and “delivery” categories of innovation. Their research has indicated that 2% of projects produce more than 90% of value.

The above research has led Doblin to develop methodologies for mapping the areas where companies might identify the most profitable areas for innovation effort to be applied. They have created innovation landscapes for particular industries using the 10 types of innovation listed above and these landscapes pinpoint where innovation efforts might be profitably employed for a particular industry. (28)

Doblin consultants who enter into innovation projects with their client companies have developed specific tools that are based largely on the types of processes that designers would use when asked to identify new product or service designs. The Doblin processes are useful tools for developers of corporate entrepreneurs to build into their innovation projects. They may include the following:

1. Diagnosis of current commercial realities
   
   Client interviews
   
   Anthropological/ethnographic studies
Landscape analysis to identify industry history in innovation
Comparison with industry trends

3. Innovation Intent Workshop
Executives and researchers determine their innovation intent
Focused innovation is sought to improve innovation hit rates
Alignment between corporate strategy and strategic intent developed

4. Discovery Workshop
New discoveries are sought to satisfy innovation intent
Discoveries sought from external research and internal capabilities

5. Working teams produce business cases for new revenue streams
Doblin consultants and internal teams produce prototypes
Business cases presented to executives for support
Decisions made to proceed

6. Implementation of new innovative opportunities
Teams established and commissioned to implement
Detailed plans prepared and projects launched
Progress reports provided (29)

4. A Selection of Tools Used by the Author in Developing Corporate Entrepreneurs

The 5 entities described above have provided the author of this paper with philosophies and techniques and tools which he has attempted to employ over the past 25
years in assisting corporations to build innovation through the development of corporate entrepreneurs.

The range of useful tools fall into four categories: 1 Preparing for Innovation, 2 Recruiting and Selecting Corporate Entrepreneurs, 3 Innovation Laboratories and Workshops, 4 Institutionalizing Innovation.

1. Preparing for Innovation

- Working with senior executive team to ensure that commitment to the innovation process exists
- Establishing innovation intent and developing the design criteria for innovations with executive team, i.e. what are their expectations?
- One day workshops with middle level managers to ensure that they understand the likely outcomes and effects on their own activities: creating an innovative culture
- Choice of innovation managers or facilitators to oversee the process: ensuring that people with facilitation skills rather than directors or controllers are chosen

2. Recruitment and Selection of Corporate Entrepreneurs

- Creating processes for self selection by corporate entrepreneurs; advertising the process and inviting interested people to attend a seminar
- Conduct of after hours seminars to explain the innovation program; people who attend after hours are more likely to be committed
- Interviews with seminar participants who express interest in self selecting into the innovation program; the interviews are designed to ascertain whether genuine commitment exists

3. Innovation Laboratories and Workshops

- A series of two or three day sessions spread over 6 to 12 months are provided to explore entrepreneurial behavior and to build business cases
- Laboratory sessions may incorporate the following topics;
  - Examining the Executive Team’s innovation intent
  - Identifying opportunities in new discoveries

New discoveries might be made in:

- Un-voiced needs of customers or users
- Un-examined dogmas or orthodoxies of company or market
- Un-exploited trends in society or markets
- Un-seen assets in the company including intellectual capital
  (The 4 “Uns” are a tool developed by Gary Hamel)

- Understanding entrepreneurial approaches to ambiguity and uncertainty
- Establishing personal and team visions and goals
- Exploring the Venture Capitalist’s approach to risk
- Evaluating new innovative opportunities
Building business cases

Conducting low cost market research for new learning

Sharing business concepts with “new voices”

Identifying and fostering mentor and sponsor support inside the company

Building prototypes

Discovering sources of funds either inside or outside (including personal)

Exploring remuneration and reward systems

Developing presentation and internal selling skills

Presentations to sponsors, mentors and executive teams for support

4. Institutionalising Innovation

- Creation of an in-company centre which houses innovation facilitators

- Publication of regular news-letters sharing results with all employees

- Establishment of data bases for easy access to all innovative employees

- Ongoing assistance to entrepreneurial teams and intrapreneurs who are charged with the task of launching new ventures

- Remuneration and reward systems

- Working with universities, research institutes and other innovative organizations to ensure that all emerging developments are accessible to the company’s corporate entrepreneurs
5. Some Selected Outcomes from Corporate Entrepreneur Development Processes

The author of this paper has spent the past 25 years attempting to demonstrate how the development of corporate entrepreneurs can lead to increased levels of corporate innovation. Not all attempts have been successful but almost all attempts have led to the implementation of some innovative initiatives. Some of the author’s work was reported to the Babson College Frontiers of Entrepreneurship Research Conference in 1992.(30) Other writers identified above, have reported from time to time on the outcomes of their efforts.(31),(32),(33)

The following five brief stories attempt to give a flavour of the types of outcomes that have been achieved.

1. The CEO of a large national bank implemented an innovation program to bring the bank’s performance ratings up to those of competitors. Twenty five workshops were provided across the nation. Each workshop consisted of 20 to 25 self selected participants who identified and evaluated opportunities for changed business strategies, product ranges and customer support systems. A steering committee oversaw the whole program providing ongoing mentoring to participants. An external facilitator conducted the workshops over a nine month period. Regular reporting to the whole corporation on progress took place for a two years and at a meeting held 30 months after the commencement of the innovation program, the CEO reported that the bank’s performance indicators now put them at the top of the league table. The CEO reported that it was his
belief that the innovation program had provided the catalyst for the fundamental changes in culture and performance that had occurred.

2. A State office of a national telecommunications company discovered that some “natural entrepreneurial employees” had sold some unique services to a large Government agency in their State and had generated some millions of dollars of net profit from the exercise. The State management team decided that this type of behaviour should be fostered through the provision of a School for Intrapreneurs. Groups of middle level managers were invited to join innovation workshops and over a period of six months these managers identified, evaluated and launched a range of new ventures which generated some tens of millions of dollars of new revenues.

One of the intrapreneurial teams created a “Marketing Consulting Group” using in-house skills to offer an external consultancy. They produced a business case to show that the in-house performance of the marketing department would not be adversely affected by the new venture. They presented their case to a group of senior executives who were impressed with the revenue and profit projections. The team of intrapreneurs suggested that they would like to have a share of the ownership in the consultancy and thus they placed a cheque on the table for $30,000 and asked that they be given a 25% shareholding in the venture. The executives deliberated for 20 minutes and then returned to indicate that the corporate policies would not allow employee ownership. The intrapreneurs had expected that may be the response and so they removed their financial ownership
offer and proceeded to negotiate a share of the profits to be paid as a bonus to them if the plan proved realistic. The executive group found this to be acceptable and thus, the Marketing Consultancy was launched soon after.

3. The specialty chemicals division of a large conglomerate decided to develop its innovative efforts by encouraging self selected, corporate entrepreneurs to engage in a series of monthly innovation laboratories. Participants emerged from various parts of the organization and technical people found themselves working in entrepreneurial teams with lawyers, marketers, accountants and administrators. One team developed a rust retardant product which was later successfully launched and it produced significant new revenues for the corporation. In fact, one executive reported five years later that the rust product that emerged from this program was the biggest selling product for the division over that period. One participant in the innovation program was an administrative assistant to the division’s General Manager. She had observed previously that when administrative assistants in the whole corporation were absent on leave, the Human Resources Department hired replacements from a “temporary services” company. The program participant had also observed that many of her contemporaries over recent years had resigned to raise families. She realized that these people were an untapped asset who could be invited to provide short term, temporary services to the company when others were on leave. They knew all the company’s policies and practices and could become productive with very little briefing. Her interviews with past employees and her negotiations with the HR
Department during the innovation laboratory sessions, proved positive and a very successful process was initiated which both saved the firm substantial sums in hiring of external “temps” and kept a previously untapped human resource in the company’s employ.

4. The Development Director of a technology company decided to impress the Board of Directors by developing two $50 million revenue streams in three months. He offered the company’s employees a reward of three months leave on full pay and two first class, round the world airfares, if they could develop for him a $50 million revenue stream. Nothing happened and the Development Director was frustrated and annoyed with the employees.

A developer of corporate entrepreneurs was asked for advice and he suggested that maybe the employees needed to be shown how to identify and evaluate innovative opportunities for new revenue streams. It was suggested that bright, intelligent, university educated employees may not necessarily have the skills or attitudes necessary to engage in uncertain, risky evaluations of new initiatives. The Development Director accepted the advice and self selected corporate entrepreneurs were invited to engage in a series of innovation workshops. Over a six month period, two $50 million revenue streams plus a number of smaller ventures were identified and evaluated. Implementation took a further year but the firm became convinced that the processes employed were very effective and potentially profitable.
One interesting outcome of this project was the effectiveness that was observed in bringing “a new voice” into the innovation workshops. A successful technology-based entrepreneur was invited to sit with entrepreneurial teams and help them to make new discoveries and grow the opportunities that they identified. His experiences were in different technological fields but he was able to bring new ideas, connections and networks to the corporate entrepreneurs. In fact he identified one of the $50 million revenue streams which was eventually launched.

5. A semi-government agency had built an innovation theme into its strategic plan but the Senior Executive Group (SEG) realized that they were lacking in internal expertise to establish an innovative culture. An external developer of corporate entrepreneurs was commissioned to institute a process to bring innovative behaviour into the organisation. The consultant worked with the SEG to determine the direction that the innovation process should take and middle level managers were provided with seminars to demonstrate the likely outcomes from the process. When the consultant suggested to the CEO that staff should be offered the opportunity to self select into the process the CEO suggested that this would not be appropriate. He felt that no-one would volunteer because radical downsizing in recent years meant that no employees had excess time to work on innovative projects. The consultant had a different perspective and advertised throughout the organization, two after-hours seminars to outline the way in which the innovation program would operate. One hundred employees attended these
seminars in their own time and 25 attendees signed up for a series of two-day innovation laboratories. They were warned that apart from the two-day laboratory sessions, they were unlikely to be provided with time away from normal duties to work on their entrepreneurial ventures. They were not deterred and gave the impression that they were delighted to be given an opportunity to contribute to the organization even if it meant investing their own after-hours time.

The twenty-five laboratory participants identified and evaluated 10 innovative ventures within six months and presented these to the SEG for approval and funding support. Ventures were varied but all proved to be acceptable to the executive group. One venture developed a new service for clients which with some sponsorship that was arranged during the laboratories, forecast an annual new revenue stream within three years of $35 million. Another venture developed a plan to create new uses for a piece of expensive equipment that had been purchased some years earlier. The new uses included leasing the equipment to other Government agencies and charging hiring fees. The business case forecast annual savings coupled with new leasing revenues of $750,000 for the organization. Other ventures approved for implementation by the SEG generated new revenues, cost savings and some provided new innovative services to the clients of the Agency. The SEG came to the realization that their organization contained a large untapped entrepreneurial talent that with appropriate support and encouragement, could be employed to change the corporate climate.
6. Discussion

The above issues are a comment on 25 years of practice as an entrepreneur and intrapreneur developer in which the author attempted to acquire and apply best practices in assisting client organizations. At least four significant lessons have been learned over those years which may be useful to other professionals who engage in similar activities.

1. Twenty five years of unprecedented change have confronted corporations with the need to find methodologies for entrepreneurial thinking and for finding new and innovative ways of coping. The author has found that large companies who tackle the new challenges head-on can develop its corporate entrepreneurs and develop cultures in which many employees are searching for and implementing innovative opportunities for the corporation.

2. Many CEOs in recent years have expressed the need for innovative action to address the emerging challenges. However, it is the experience of this author that too few CEOs have taken the time to examine the various methodologies that may be employed to satisfy their needs. Perhaps the above overview of some available processes may be of use to CEOs seeking answers.

3. There appears to be an enormous untapped talent within organizations which is capable of being used to build innovative activity. Of course, not all employees either have the talent or have the desire to engage in entrepreneurial activity. However, experience has demonstrated that all organizations have underutilized
corporate entrepreneurs and with the appropriate processes, the skills of these people can be harnessed.

4. Conventional wisdom in the general community suggests that entrepreneurs are “born, not made” and thus, training and development processes are likely to be ineffective. However, all of the people and entities described above, have shown that entrepreneurial people who exist in large organizations can be assisted to improve their effectiveness as corporate entrepreneurs if they are confronted with the range of opportunity identification and opportunity evaluation skills that are often used to assist independent entrepreneurs.

7. Opportunities for the Profession of Corporate Entrepreneur Development

Research papers, if they are to be useful, ought to make a contribution to the profession in which they are located. The following are five opportunities that might be worth exploring by readers of this paper.

1. Read a selection of the books papers and websites shown in the bibliography to obtain a feel for the methodologies that have been employed to date.

2. Interview a few innovation managers in large corporations and seek their comments on the methodologies described in this paper.

3. Meet with a CEO and seek his/her comment on the innovation processes described in this paper and describe some of the outcomes that could be obtained from their application.
4. Identify an organization that is facing an urgent need to change to cope with emerging market and community pressures. Offer the CEO a corporate entrepreneurship program. To support your offer, suggest that he/she and their executive team should read some of the materials contained in the bibliography to this paper.

5. Bring a group of corporate innovation managers together and share the contents of this paper with them. Seek their reactions to the concepts described and facilitate with them a dialogue around how they could work collaboratively to ensure that some of the concepts are introduced into their own organizations. Of course, if all of the innovation managers are already using all of the methodologies described, then interview them all individually, and prepare and publish a set of case studies on their activities.

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The Strategic Renewal of Family SME’s: A Case Study

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Abstract:
The aim of this paper is to bring conceptual and operational clarity to the phenomenon of strategic renewal and, based on a multigenerational family SME case study, to apply it to family firms, an area in which it has received very little attention.

Introduction

How do family firms (FF) behave when it comes to strategic renewal (SR)? This question is of interest in that it links two separate streams of research, and addresses the underlying question of what a family firm can do to thrive on the long run.

Strategic renewal – which may be defined, on first analysis, as “corporate entrepreneurial efforts that result in significant changes to an organization's business or corporate level strategy or structure” (Sharma and Chrisman, 1999: 19) – has recently been the subject of renewed interest. Although Agarwal and Helfat (2009: 281) emphasized that the topic had “received relatively little attention", the special issue of Organization Science published in 2009 bears witness to the actuality of this question. Alongside the research done over the past twenty years in the area of strategic renewal and in parallel of it, a research field focusing on family firms has emerged, and already has its own associations, specific journals and congresses tackling the subject (Bird, Astrachan, and Pistrui 2002; Sharma, Hoy, Astrachan, and Kairanen 2007). What is more, FF’s research has now found a legitimate place in major management...
journals, and special issues are now regularly dedicated to it. (Craig, Moores, and Howorth 2009).

Until now, the question of the SR of FF’s has barely been touched upon at all, Sardeshmukh and Corbett (2008) being the most notable exception, to our knowledge. Nonetheless, the issue is important as it touches to the survival of one of the most common form of organization in the world, the family-owned business (herein referred to as FF). So the question invites us to scrutinize the way by which the FF may transform itself and its activity in order to cope with the changes that occur in the environment. When it comes to small or medium-sized family firms, the issue of strategic renewal is even more sensitive because, in most cases, these organizations do not benefit of the large amount of resources often available to large corporations. The aim of this paper is to explore this question by offering an analysis of the SR of a medium-sized FF. In doing so, we hope to show that the strategic renewal approach introduces a new angle from which to examine the longevity of FF’s and makes it easier to grasp the organisational processes underlying this.

To begin with, we offer a conceptual and operational clarification of SR, in general, and then in the context of family SME’s. Thereafter, we present the case study of a family SME that was founded in 1826 and is now in the hands of the 6th generation of the family. This family SME appears to be particularly well suited to deal with the research question given that its trading business has allowed the firm to gain a footing in a dozen or so different business areas and markets, over the course of its 184-year existence. Afterward, using the case study as our point of reference, we discuss the mechanisms of SR in order to shed light on the peculiarities of the choices opened to a family SME. Finally, we consider the scope and limitations of this approach.
The SR of FF’s: Reference Points from Literature

In papers written almost 20 years apart, Stopford and Baden Fuller (1990) and Agarwal and Helfat (2009) underline the lack of consensus when it comes to the definition and meaning of SR. So, we will try to clarify the concept and definition of SR, and to provide an operationalization, before seeking to define how the FF context may potentially affect its content and effects.

Strategic Renewal: Conceptual Overview and Operationalization

In the medical field that spawned the term, “renewal” refers to the repair phenomena whereby an individual regains integrity, as the organism replaces a part that has been lost or damaged spontaneously, accidentally or experimentally.

In management science, the concept of SR refers to a deliberate action. Over the past twenty years, authors have unanimously considered that SR is an answer to the changing and turbulent business conditions (Huff, Huff and Thomas 1992; Simons 1994; Whitney 1996; Floyd and Lane 2000; Pappas and Wooldridge 2002; Volberda 2005), echoing the assertion of Huff, Huff and Thomas (1992) whom consider the term “strategic regeneration” to be a substitute for the term “strategic change”. From this perspective, SR appears to be a kind of entrepreneurial activity implemented by established or mature companies in order to combat the dangers arising from maturity or decline (Baden Fuller and Stopford 1996; Verbeke, Chrisman, and Yuan 2007), or from internal and external changes (Capron and Mitchell, 2009), or in order to face up to the threats posed by dynamic and complex business conditions (Pappas and Wooldridge, 2002; Volberda, 2005). So, the diverse studies acknowledge that SR may be view as an answer to the challenges issued from external or internal factors, an answer that tries to keep the company afloat, even if it is not its only aim (Baden Fuller and Stopford, 1996).
But, if Germain (2007) sees in these works a “strategic school of thought” around Baden Fuller, we must nevertheless notice that these studies are not yet integrated in the core of the strategic literature considering that, for instance, in the special issue of Organization Science focused on SR, no author referred to Charles Baden Fuller's work. If we try to provide such integration, relying on the various definitions found in literature (See Table 1), it emerges that all authors agree that the dimensions of change and temporality are central to RS, in addition to other factors like inertia, maturity, dynamics, competition, entrepreneurial ability, opportunities, skills and abilities, etc. In fact, the literature may be separated in two parts, according of the level of analysis privileged by the author. At the micro level of analysis, the SR operates throughout the changes in activities and products, while at the meso level, it functions at company level, in terms of attempts to regenerate by implementing changes in strategy and business structure.

**Insert Table 1**

Going further, it will be necessary to identify the process and content of SR (Agarwal and Helfat 2009), and to look at how companies manage to renew themselves. To do so, we have to be aware of the fact that SR is not an easy task, that it is only one possible option in front of changes, and that several mechanisms can be used to renew the firm or activities.

Not all firms are equal in front of changes: the younger the company, the more likely it is to undergo considerable organisational change (Amburgey, Kelly, and Barnett 1993). More generally, the company has to face with its routines and the resulting inertia. So, the forceful willingness of managers and company members to safeguard the longevity and success of the company is a necessary condition, if not sufficient in itself, to make possible the strategic renewal of the firm. This leads Baden Fuller and Volberda (1997) to consider that the company can react in three ways to changing business conditions:
(1) It can avoid change, in other words adopt a strategy of inertia.

(2) It can accept change, processing it externally through an “outsourcing” strategy, for example by signing contracts, alliances and partnerships allowing it to capture new technologies or new ideas.

(3) It can implement an internal adaptation, and renew itself. Here lies the SR, and we have to notice that it will imply an entrepreneurial behaviour, as the manager will have to redefine some aspects of the structure of the firm, or to grasp new market opportunities – and/or to innovate.

One can consider that these ways constitute a first level of options for the managers: SR is only one of the possible behaviours in front of changes (See Germain (2007), for an overview of the factors of choice between these options).

When the manager decide to engage in SR, he may envisage four mechanisms (See table 1), by superimposing two methods of managing change (spatial separation and temporal separation) on two types of change consequences (“revitalisation” and “reordering”) (See table 2 for the definition of these terms).

**Insert Table 2 and Table 3**

Summing up what precedes, Figure 1 allows us to identify the conceptual framework that governs the SR approach, and the different paths available in face of changes.

**Insert Figure 1**

**The Particularities of Strategic Renewal in Family SME’s: Some Suggestions**

Although the area of FF’s research is undergoing rapid growth, the initial question of how to define them in theory has long directed the focus of debates (Allouche and Amann 2000). Here, we will consider that FF are characterised by the more or less extensive involvement of the family in the ownership and management of the company, as well as by the desire to hand it
down to subsequent generations (Chua, Chrisman, and Sharma 1999). This is the standpoint from which we will consider the SR of FF’s.

Indeed, the emphasis that most FF place on the aim of continuity (Miller and Le-Breton Miller) and their commitment to multigenerational transmission lead us to think that they might prefer the option of SR to inertia or outsourcing. Indeed, at one moment or the other over their life, FF’s will necessarily come up against changing business conditions. Thus, considering their desire to keep the company in business and to hand it down to subsequent generations, faced with changes in the market and/or technology, the heads of FF’s will have to emphasise the role of SR in the company, rather than accept the inevitability of a closure (choosing inertia) or consider transferring some of their interests and/or business to external companies (choosing outsourcing).

While the different levels of generic choice (inertia/transfer/SR) can be viewed as such, it is also worth looking at the forms SR can take. From each of these points of view, the family nature of the company can result in influences different to those generally described in literature.

**The SR of FF’s: Empirical Study**

To better understand the phenomenon of strategic renewal in family SME’s and to illustrate the mechanisms of renewal, we have opted for a single case study of a family SME that was founded in 1826 and is now in the hands of the 6th generation of the family: “Edmond Raoul Duval et Cie” (ERDC). As the case analysis will show, over its life, this company has had to face up to many events that could have caused it to go out of business.

Performing a case study is often the favoured method of investigation, given its contribution in terms of detailed analysis of the processes and theoretical models (De la Ville Indeed, this study has made it possible to reconstruct chronologically the events, assess local causality and draw up explanations that has been submitted to and validated by the actors (Wacheux 1996). From a methodological point of view, studying a single case is a relatively
common approach when looking at family firms (Chrisman, Sharma, and Taggar 2007), and
more generally management (Hlady-Rispal 2002). This approach has the advantage of allowing
an in-depth analysis of the company being studied and makes it possible to consider the context
in which the company has developed (Yin 2003). However, case studies are often criticised
because they limit the extent to which the results can be generalised, and are sometimes
considered anecdotal; seen from this angle, the single case study does not meet the criteria of
accuracy, economy and robustness (Giordano 2003). What is more, one of the major ongoing
debates surrounding the use of case studies in social science research is how many cases are
necessary and sufficient (Eisenhardt 1991).

To carry out this case study in depth, we conducted around twenty interviews between
2007 and 2009 with members of ERDC management, including the current company head, a
previous head who joined the company in 1946 and, finally, a long-term employee of the
company. In addition to this first-hand data, we used research from the company archives, which
consisted mainly of minutes from general meetings and meetings of the board of directors of
ERDC and its colonial subsidiaries from 1932 to the present day, registers of transactions made
by the Foerster business between 1878 and 1932, books of accounts, the stock transfer register,
confidential notes and internal reports. The study was supplemented by obtaining the complete
text from a conference held at the university of Le Havre by a former director, and by reading the
work of historians including Claude Malon on colonial Le Havre (a work published in 2006 and a
thesis including an interview with a former director), Hubert Bonin (2008) on the history of
overseas trade from 1887 to 2007, a note on the history of the ERDC family group, written by
Mathieu Goguel in 2005 (an unpublished internal document), and Nathalie Aubourg’s thesis
The SR of FF’s: Points of Reference of History

We will now take up the story of the family SME in episodic format, and will try to identify the points marking renewal in the company when it had to face up to certain events.

The Foerster business was founded by Frédéric Guillaume (FG) Foerster in 1826, in Le Havre (France). The company's line of business was tropical products from the West Indies and French colonies. It became a family business when his son, Frédéric, wearing the same name as his father as it was usual at this time, joined in 1835, and later, in 1863, he took over the family business. In the footprints of its predecessors, few years later, Edmond Raoul Duval (RD), grandson of the founder and nephew of Frédéric, the second, joined the business in continuity of the family tradition. Later, when he inherited the reins of the family business and became director in 1890, the company changed its business name to “Maison Raoul-Duval”. Finally, when at their turn Edmond’s sons joined the FF, the business became a joint-stock company, ERDC. For more than 180 years, the company has managed to continue operating in its main line of activity, trade, despite the hazards and changes that have affected the business. In this respect, the desire of successive directors to preserve the family heritage has allowed this company to survive while many other companies operating in the same business have folded over time (Aubourg 2000). Figure 2 illustrates the succession of family and non-family directors of ERDC from the year it was founded up to now.

Insert Figure 2

Trading activities in tropical products and shipping

FG Foerster based his business on the tropical products trade, which was supplemented by sail shipping. As this period of history was characterised by geographical expansion and the growth in maritime trade with the United States, the West Indies and the French colonies, FG
Foerster, the founder, and his son Fréderic, focused their business activities on trading with these destinations, importing products little known in France at the time and exporting national specialities like salted butter (Goguel, 2005). Thus, by 1868, the Foerster's business possessed no fewer than nine sailing boats plying the waters between its foreign trading posts, which allowed the company not only to transport its own goods but also to earn additional profits by offering freight services to other trading companies. At that time, they traded on many tropical commodities (coffee, cocoa, rubber, spices, tropical woods, snakeskin, ostrich feathers, etc.).

When he took the reins in 1890, Edmond RD kept up the existing activities of the Foerster’s business while also trying to diversify the range of traded products. In 1907 this enabled him to buy a participation into one of the largest sugar/rum companies in Guadeloupe (the Société Industrielle Agricole de Pointe à Pitre, or “SIAPP”), which was in a state of bankruptcy at the time. The company thus gained the monopoly of representation of SIAPP in France, a lucrative business even if it was a minor one.

The arrival of steam boats at the start of the 20th Century sounded the knell of sail shipping. As the company’s main line of business was trade/import, faced with this major technological innovation that greatly reduced transport times, the directors decided not to renew the merchant fleet and to gradually abandon the shipping business in order to focus on trade and to develop the company in this area by creating a subsidiary in Indochina. This company, which was named the Société Havraise Indochinoise (SHIC), was created in 1926 in Saigon (an old French colony) and consolidated the policy of expansion and diversification.

**Indochina and the transition towards coffee/cocoa**

The purpose of the SHIC was to supply the parent company, thus taking local intermediaries out of the equation. It was a natural move for the company “… insofar as it
specialises in tropical and exotic products, to establish itself in this new territory, in order for the world to gain from its new products: skins, peppers, coffee, rubber and its derivatives, kapok, peanuts..." (Goguel, 2005: 9). After the growth of its business in Indochina, the parent company, which changed its name to ERDC in 1933, soon opened an office in Marseille and subsidiaries in Saigon (Vietnam) and Phnom Penh (Cambodia). However, the political and economic instability in Indochina and the outbreak of the Second World War slowed down trade and affected profits: “basically, this year all our efforts will be concentrated in settling up the numbers from the past year and organising for the future, while continuing, as far as possible, to keep the business running as usual... The office we opened in Marseille in February 1941 is fulfilling our expectations" (minutes from the Shareholders’ General Meeting (SGM) on 12th May 1942). Imports were brought to a halt in 1942 as a result of the war, in order to prevent major risks such activities now involved: “the imports business, which was ticking over until the start of November 1942, has been brought to a complete halt, for reasons you already know, and we have not lost all hope that, until further notice, we will be able to regain our market share in imports as a result of goods we have imported to France previously” (SGM, 19th April 1943). The group’s responsiveness in terms of anticipating change after facing the setbacks of the changing business conditions allowed it to create new offices in Phnom Penh, Paris and Bordeaux in order to carry on trading and also to look for new opportunities, for example starting to trade with Côte d'Ivoire (one of the leading coffee and cocoa producers) at the start of the 1940’s.

The dangers of the war in Indochina ultimately caused the group to close its subsidiary there, although it did not altogether cease to trade with this part of the world. With the fall of Dien Bien Phu in 1954 forcing the subsidiary to be moved to Le Havre, the closure of the Saigon agency in 1960, the closure of the Marseille office in 1962 after the independence of Madagascar
and the ending of trade with this territory and subsequent reduction in trade with Indochina, the parent company was forced to close the Phnom Penh office in 1965.

While this series of closures was taking place, culminating in the loss of the SHIC subsidiary, the company was simultaneously developing its business in the coffee and cocoa trade with Côte d’Ivoire, which provided the group’s business with a new burst of momentum.

**Specialising in coffee**

Although the group had been trading coffee from its beginnings, with coffee from the West Indies, Indochina and America, it was not until the middle of the 1940’s that it decided to pay this commodity more attention, partly as a result of the political problems dogging Indochina at the time. An African subsidiary was opened in Abidjan in Côte d’Ivoire in 1952: the “Société Havraise Africaine de Commerce (SHAC)”. The main reason SHAC was opened was to sell Robusta coffee and cocoa, as well as to provide Africa with a platform from which to send international exports. The Côte d’Ivoire subsidiary did not enjoy an easy start to life, and registered losses during its first year in business, as illustrated with this business report: “the cocoa and coffee campaign has experienced difficult conditions... the quality of the cocoa fell far short of the level required... there was less coffee than after the previous harvest, and active competition... we have made a loss of 5,647,846 CFA Francs as a result of one of the contractors failing” (SHAC’s SGM on 28th January 1954). However, in spite of these losses, the directors recognised it as an opportunity for the group to make its name known on the local market and to prepare for the future, and as such they decided to pursue it. From the 1960’s onwards, the subsidiary began to make a profit and extend its structure: “We are happy to be able to report to you that we have, over the past financial year, been able to expand our operations appreciably and obtain results that finally correspond to the level of investment we have made up to now and
the unflagging work of our staff over course of the past campaign” (SGM on 4th March 1961). The positive development of the coffee/cocoa business continued until the start of the 1970’s, when the group decided to open other SHAC subsidiaries in Côte d’Ivoire to sustain the thriving coffee/cocoa industry. It thus opened a second factory in the town of San Pedro in 1970. Starting in 1973, it founded companies in partnership with other firms operating in the same sector and also created a subsidiary of its own to process the coffee/cocoa beans in 1978: the “Société Havraise Africaine de Décorticage” (SHAD) (Goguel, 2005: 10).

However, with the upheavals brought about by decolonisation in Africa, this success was not to last indefinitely. When Côte d’Ivoire gained independence, the company's assets in the country were gradually confiscated, and SHAC finally shut up shop there in 1987. With this sad ending in sight, but continuing to believe in the future of coffee, the group successively bought Inter-Océanique, a coffee-trading business belonging to Rufenacht, in 1980, followed in 1988 by Jobin & Cie, which specialised in trading and distributing coffee to wholesalers. At the same time, it set up the Société Commerciale Raoul-Duval (SCRD) to look after all of the group’s coffee business.

**Searching for diversity**

Alongside the coffee business, which constituted the group’s major source of income, and in view of the fact that a significant proportion of the trading activities relating to other exotic products had been abandoned, the group began to make a series of takeovers from 1965 onwards (external growth). Managed in tandem by Gilbert et Hubert RD (two 5th-generation first cousins), the purpose of these takeovers was to diversity group activities and to reduce the group's dependence on a single source of provisions: “the President wishes to inform the Council

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2 This included a stake in a transit company (Prodexport), a company that maintained, repaired, purchased and sold all kinds of weighing equipment (SBCI), a storage company (SCSP), a property company (SCI), a factory processing agricultural products (UTPA) and STLCI (line of business unspecified).
that the income from our two subsidiaries (SHAC and SHIC) represents more than 75% of our total income, and that from our overseas activities (SHAC, SHIC, Sté Pointe à Pitre and Optorg) more than 82% of the total. Looking to the future, this is a dangerous situation and must be modified. Although the 1965 financial year produced favourable results, it is essential we introduce new sources of business in 1966. Of course, we must continue to develop our traditional areas of business (coffee trading, insurance) but it is also necessary for our company to start acting in one or more completely different economic sectors. As part of this search for new business, the president welcomes any suggestions the Administrators can draw up” (218th meeting of the Board of Directors, 15/03/1965).

As Goguel noted, “just like any good family group, the directors were always looking to diversify the business in order to minimise the risks” (2005:4). After assessing several businesses, this diversification drive began with the takeover of a business put forward by the legal auditor in 1970: a company specialising in the import and export of industrial equipment, based in Strasbourg, called “Société Nouvelle de Réorganisation et de Modernisation de l’Industrie Alimentaire”, (SNRMIA). The opportunity to invest in a shipping company specialising in maritime and river transport presented itself in 1971, and was followed by the takeover of a company manufacturing snail shelling equipment in 1975. Next came the takeover of a company specialising in fibres, honey and broomsticks in 1982 (later to become Société Havraidex), and the purchase in 1983 of shares in the “Compagnie Française des Extraits” (CFE), a company specialising in vegetable extracts for use in the tanning, cosmetics and animal food industries. Although these takeovers contributed to the group’s growth, most of them have since been resold or closed.
Restructuring the group around extracts and wood

Globalisation and increasing transparency in the coffee trade, along with the growing risks in the middle of the 1990’s, forced margins down considerably. The group decided to focus on greatly developing the extracts business (CFE) - which has been managed since 1999 by a member of the 6th generation, François RD - and the wood business, with the company Havraidex. Although the continued decline in prospects for the coffee business ultimately convinced the directors to dispose of this business in 2006, the past decade has been characterised by the desire to develop other activities to safeguard the group’s long-term future.

The work of CFE, which is based on the ability to develop and formulate products using vegetable extracts, requires the company to expand into new territories that are currently little developed or difficult to access. Therefore, a site was purchased in Nicaragua in 2004 to allow a change in dimension, both because it opened up the possibility of cultivating the plants required to provision the group, and because this made it possible to set up an on-site processing plant.

As far as the wood trade was concerned, the company had always adopted the approach of exporting French wood and importing exotic wood. When the decision was taken to bring to a halt its activity in the coffee trade, the director had to consider how this until then marginal part of the business could be developed. While the operations of many actors whose businesses make use of timber are still based on the large-scale exploitation of resources, the directors of the family group are keen to favour an environmentally friendly - or sustainable - exploitation of such resources. When the leaders of Gabon realised how important it was that the country's forests be protected through legislation that prevented both deforestation and the indiscriminate exploitation of the area, conditions were put in place at ERDC to subsequently invest there. The company embarked on this project in 2006, buying a concession and setting up a sawmill that
made it possible to make better use of the resource on the site, and to ensure exploitation was kept to an acceptable scale. Today, this local operation has some thirty employees and is in its first year of production.

Therefore, the past 184 years have seen the family group transform from an international trading concern involved in transport and shipping to a group specialised in vegetable extracts and wood. This transition has been made possible by several episodes in the group’s history that characterised its growth first in Indochina, then in Africa (SHAC). Even though the group appeared to have coffee and cocoa as its central activities, it was always looking to maintain a certain degree of diversity in its business. At the same time, it can be seen how, over the course of the various episodes the group has been through, the directors have tried to revitalise the business.

Results and Discussion

In spite of the changing business conditions, which were not always conducive to the growth and prosperity of ERDC, the company has always tried to safeguard the long-term survival of the family heritage for future generations. This desire to protect the company over the long term has been backed up by the firm’s entrepreneurial ability and its ability to seize opportunities that came its way.

The five episodes set out above illustrate the group's strategic choices and the actions implemented to combat the uncertainties and changes in the business conditions. Faced with pressures from the business conditions, political events, competition and new technologies, the group found itself in a position where it ended up either disposing of or selling parts of its business, a strategy Baden Fuller and Volberda (1997) refer to as “outsourcing”. However, as this is a family firm, one of the group’s major priorities was to keep the business up and running (Miller and Le Breton-miller 2005) in order to pass it on to the next generation. ERDC has
always tried to establish itself in new business areas and set up new sources of provisions before disposing of or selling a business, with the aim of keeping the continuity of the business and ensuring the group’s survival. Therefore, the desire to safeguard the long-term survival of the group, backed up by the entrepreneurial spirit of successive directors at the company, which enabled them to seize opportunities, has also played a decisive role in the choice of strategy adopted in the face of changing business conditions. The choice of renewal mechanism has therefore not been a systematic one and, depending on the situation the company has found itself in, such a mechanism has either been put in place by bringing skills and abilities already existing within the company into play, or by exploring new avenues of growth.

In the case of sail shipping, which was by no means an insignificant aspect of the group's business, the arrival of steamboats, seen as a major technological innovation, triggered the SR process. The director decided not to renew the fleet\(^3\), even though it continued to hold the shipping business for some time. This decision had imposed to redefine what the mission of the firm was and in which kind of activities they were. The diversification began with the opportunity to acquire a participation in the SIAPP distillery, which ensured to the company an exclusive trade in the goods in question, at the same time creating a subsidiary in Indochina that boosted its business in the tropical products trade. It only abandoned the shipping industry when it had set up its business in Indochina and consolidated its trading activities. In this area, the company looked into other possibilities, buying the SIAPP and selling Guadeloupian rum (regeneration), and making the most of its maritime trade and business skills by creating the SHIC subsidiary in Indochina (Venturing).

\(^{3}\) One of the reasons why they abandoned the shipping business is the importance of the investment that would have been necessary to renew the fleet, largely exceeding the resources of the small-sized family business.
Next, as business slowed in Indochina as a result of the war and the political and economic upheavals in Saigon and Cambodia, the group began to look into new destinations where it could continue to do business trading tropical products. This led to the start of its business in Côte d’Ivoire, which was one of the leading coffee producers, and gradually the group set up its subsidiary SHAC there in 1952 (Venturing). At the beginning, as the business in Côte d’Ivoire was not profitable, ERD also kept up its operations in Indochina, albeit while also gradually reducing these operations before finally bringing them to a complete halt in the 1970's, when SHAC’s business was flourishing at its height. The group also developed within the SHAC subsidiary a specialisation in the coffee industry by implementing a vertical integration of activities, as well as creating new subsidiaries and getting involved in activities outside trade, for example processing coffee/cocoa beans, maintenance, construction, etc. (Regeneration). Finally, foreseeing that it was going to lose its Côte d’Ivoire subsidiary, the group grasped all the opportunities that became available, diversifying its sources of coffee provisions by taking over Maison Jobin and Interocéanique (rejuvenation), entering new areas of business with SNRMIA and Havraidex company, etc. (Reordering).

The Figure 3 summarized the different episodes of strategic renewal that have dotted the life of ERDC and led to its transformation through time. This figure highlights the overlapping nature of the various SR initiatives, showing how the group has always tried to establish itself in a new area of business when an existing area is under threat. The case study of this family company illustrates the strategic renewal approach taken when faced with pressures from the business conditions. As a first step, we have tried to clarify the concept of strategic renewal that is often tackled in literature dealing with companies in decline or those operating in a mature sector (Baden Fuller and Stopford 1996) but have managed or attempted to survive by renewing themselves and opting for strategic choices that have allowed them to face up to inertia and
change (Agarwal and Helfat 2009). These choices find expression in “intrapreneurship”, “corporate entrepreneurship” and “renewal actions” (Sharma and Chrisman 1999), which are still largely unexplored in the context of family firms.

**Conclusion**

The company’s entrepreneurial spirit and its ability to seize opportunities have allowed it to overcome the paradox of change and stability and to confront the changing business conditions to achieve its aim of long-term organisational survival, in spite of all the setbacks and challenges it has come up against along the way.

This work has made it possible, to start with, to offer a conceptual and operational clarification of strategic renewal. What is more, we have put forward an analysis of a family SME in an attempt to contribute to the understanding of what characterises SR in a specific context. Of course, this study is only a first attempt at looking at SR in a family firm context. As we have focused on a single case, we cannot hope to provide a general observation applicable to all family firms, neither to delineate the behaviour of FF from non family ones. However, we have been able to demonstrate how the family dimension - and the desire to pass the company on to the next generation – helps explain the spirit of SR at work.

This study puts some light on an interesting process of overlapping between, on one side, the mature or declining activities and, on the other side, the start and growth of new ventures. From this, we can derive the following lecture for the practice: to guarantee its strategic renewal over the long run, a firm must continually be on the look-out for opportunities; therefore one must nurture its entrepreneurial orientations. Moreover, the manager must be committed to keep its firm on business. But, in the case of a FF, this dedication to the future maybe is facilitated by the presence of new generations that want to pursue the family tradition and business. Finally, it means also that the FF must not fear to fail. Sometimes the efforts might not
bring the success desired but, to be sure to have a heritage to pass to the next generation, the family firm's managers must go on by innovating and investing in the future, no matter whether it takes the form of new products, new lines, new ventures or new partnerships.

It would be helpful to further the study of SR in the field of FF, which is growing exponentially. To this end, it would be sensible to study other cases of family and non-family firms that have come up against similar challenges, in order to define as accurately as possible the specificities of SR in the FF context. Finally, future work can make it possible to establish this strategic current as a means of growth and a factor of long-term organisational survival in family firms.

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<th>Level of analysis</th>
<th>Author (s)</th>
<th>Definition</th>
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<td>Activities and Products (micro)</td>
<td>Guth and Ginsberg (1990: 6)</td>
<td>« Strategic renewal involves the creation of new wealth through new combinations of resources. This includes actions such as refocusing a business competitively, making major changes in marketing or distribution, redirecting product development, and reshaping operations. »</td>
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<td>Shamsie, Martin and Miller (2009: 1443)</td>
<td>« In project-based industries, however, firms pursue differentiated renewal strategies based on the timing and extent of their push for stronger capabilities in existing products and markets where they may gain a new competitive edge over their rivals »</td>
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<td></td>
<td>Kim and Pennings (2009: 370)</td>
<td>« Strategic renewal refers then to firms initiating a new stage in their established market through both new product development and attentive commitment to customers »</td>
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<td></td>
<td>Burgelman (1991: 254)</td>
<td>Strategic renewal: major change in organizational strategy proceeded by internal experimentation and selection offers organization possibilities for participatory adaptation to new environmental demands and/or to enter new niches.</td>
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<td></td>
<td>Zahra (1995: 227)</td>
<td>« Renewal means revitalizing a company’s business through innovation and changing its competitive profile. »</td>
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<tr>
<td></td>
<td>Zahra (1996: 1715)</td>
<td>« Strategic renewal refers to revitalizing the company's operations by changing the scope of its business, its competitive approach...Strategic renewal also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders »</td>
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<td></td>
<td>Covin and Miles (1999: 52)</td>
<td>« The label strategic renewal is used here to refer to the corporate entrepreneurship phenomenon whereby the organization seeks to redefine its relationship with its markets or industry competitors by fundamentally altering how it competes. »</td>
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<td></td>
<td>Sharma and Chrisman (1999: 19)</td>
<td>« Strategic renewal refers to the corporate entrepreneurial efforts that result in significant changes to an organization's business or corporate level strategy or structure. These changes alter pre-existing relationships within the organization or between the organization and its external environment and in most cases will involve some sort of innovation. Renewal activities reside within an existing organization and are not treated as new businesses by the organization. »</td>
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<td></td>
<td>Floyd and Lane (2000: 155)</td>
<td>« Strategic renewal is an evolutionary process associated with promoting, accommodating, and utilizing new knowledge and innovative behavior in order to bring about change in an organization's core competencies and/or a change in its product market domain »</td>
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<td></td>
<td>Volberda, Baden Fuller, and Van Den Bosch (2001: 160)</td>
<td>« Strategic renewal can be broadly defined as the activities a firm undertakes to alter its path dependence. Important parameters of a journey of renewal include: the behaviour of managers at each level of the organisation in response to each other (topdown or bottom-up); the way they view investing for tomorrow versus milking profits today (exploration versus exploitation); and the way in which they share knowledge with each other across organisation boundaries (intra-organisation learning) »</td>
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<td></td>
<td>Flier, Van Den Bosch and Volberda (2003: 2168)</td>
<td>« We defined strategic renewal as strategic actions to align organizational competencies with the environment to increase competitive advantage »</td>
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<td></td>
<td>Volberda (2005: 30)</td>
<td>« le renouveau stratégique repose sur une tension constructive entre routines et capacités dynamiques, apprentissage et désapprentissage, administration et entrepreneuriat. »</td>
</tr>
<tr>
<td>Level of analysis</td>
<td>Author (s)</td>
<td>Definition</td>
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<td></td>
<td>Jones and Macpherson (2006 : 156)</td>
<td>« Strategic renewal, on the other hand, means that firms must break out of these path dependencies and shift from knowledge exploration »</td>
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<td></td>
<td>Verbeke, Chrisman and Yuan (2007: 587)</td>
<td>« What we are calling strategic renewal typically involves entrepreneurial action by an entire firm, or in this case, an entire subsidiary. »</td>
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<td></td>
<td>Huy (2009: 1)</td>
<td>« Strategic renewal refers to an evolutionary process that interrupts organizational inertia in an attempt to bring about a change in an organization’s competencies and strategic direction in response to an evolving competitive business environment or create new product-market domains to extend competitive advantage. »</td>
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<td></td>
<td>Agarwal and Helfat (2009 : 282)</td>
<td>« Strategic renewal includes the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects. »</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods of managing change</th>
<th>Spatial separation: risk control is vital</th>
<th>Temporal separation: speed is vital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revitalisation of existing skills</td>
<td>Regeneration</td>
<td>Rejuvenation</td>
</tr>
<tr>
<td>Reordering central skills and peripheral routines</td>
<td>Venturing</td>
<td>Restructuring</td>
</tr>
</tbody>
</table>

**Table 3: Definition of the Mechanisms of SR** (according to Baden Fuller and Volberda, 1997, p. 105-110)

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Regeneration</td>
<td>Involves revitalising the existing skills of a dynamic unit separate from the organisation in order to test a new product or new technologies that do not require any particular rapidity.</td>
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<tr>
<td>Rejuvenation</td>
<td>This mechanism involves revitalising the organisation's central structures, and requires a radical change in the structure, strategy, technology and behaviour of the individual (Baden Fuller and Stopford, 1990).</td>
</tr>
<tr>
<td>Venturing</td>
<td>This involves creating small entrepreneurial entities by isolating a flexible unit from the rigid organisation as a whole, which is then accelerated into a space of opportunities. This is one of the slowest and least risky mechanisms.</td>
</tr>
<tr>
<td>Restructuring</td>
<td>This involves restructuring new divisions within the organisation, new products and new priorities. This mechanism is characterised by a certain level of rapidity and is a fairly risky change process.</td>
</tr>
</tbody>
</table>
Figure 1: SR Conceptual Framework

- External factors
- Internal factors
- Change/stability paradox
- Inertia
- Outsourcing

SR

- Venturing
- Regeneration
- Rejuvenation
- Reordering

Figure 2: Successive Directors of ERDC since 1826

- Frédéric Guillaume Foerster (founder) 1826
- Frédéric Foerster (son of Frédéric Guillaume Foerster) 1863
- Edmond Raoul Duval (nephew of Frédéric Foerster) 1890
- Edgar Raoul Duval (son of Edmond RD) 1930
- Jean Raoul Duval (brother of Edgar RD) 1948
- Hubert Raoul Duval (nephew of Jean RD) 1964
- Maurice Westphalen (employee) 1995
- Patrick Masson (employee) 1996
- François Raoul Duval (son of Hubert RD) 2006
Figure 3: Strategic Renewal of ERDC

Activity 1: Sail shipping;
Activity 2: Takeover of SIAPP
Activity 3: Creation of SHIC;
Activity 4: Creation of SHAC;
Activity 5: Takeover Maison Jobi and Interocéanique;
Activity 6: Havraidex and CFE

External factor 1: Steam boats
External factor 2: War in Indochina
External factor 3: Decolonisation and Independence
External factor 4: Failure of diversification businesses
External factor 5: Collapse of the coffee trade
The Impact of Corporate Entrepreneurship upon Internationalization
Strategy, Speed and Performance

Abstract

Corporate entrepreneurship encourages practices that spur innovation and renewal within established organizations. Prior studies have shown that corporate entrepreneurship (CE) promotes firm expansion and enhances firm performance. However, prior studies have not examined CE’s influence upon the speed or success of a firm’s international expansion. Furthermore, no current studies have mapped out the influence of each domain of CE upon firm strategy and performance. This paper fills this gap in the literature by extending the theoretical understanding of CE to the previously untreated context of international expansion, and also adds explanatory power to the CE construct by explaining its relationship to internationalization strategy—an important but previously undefined relationship. By answering these questions this paper answers several specific calls for research and also responds to a broadly recognized need for the inclusion of firmly-established theory from the field of entrepreneurship to the nascent field of International Entrepreneurship.

Introduction

Corporate Entrepreneurship enables organizations to gain competitive advantage through the combination of sustained innovation and a commitment to revitalizing the competitive landscape (Covin & Miles, 1999). Defined as the process in which individuals or groups within an existing organization instigate revitalization or create new ventures (Sharma & Chrisman, 1999), corporate entrepreneurship (CE) has been shown to positively influence financial performance (Zahra and Covin, 1995; Zahra, Neubaum & Huse, 2000), and corporate competitiveness (Lumpkin and Dess, 1996). In short, “corporate entrepreneurship revitalizes, reinvigorates, and reinvents” an organization. (Covin & Miles, 1999).

Given the recognized benefits of CE, the phenomenon has received significant academic attention. The underlying processes that constitute this phenomenon have been well-established conceptually and validated empirically. However, despite the considerable attention devoted to
this concept, almost no attention has been given to CE’s influence upon a firm’s international
growth (for the sole exception, see Zahra & Garvis, 2000). This lack of attention is significant
because the technological advances in communication, travel, and commerce have made
international expansion an increasingly viable option for businesses. Growth oriented firms
increasingly face the choice of whether to internationalize their business, and thereafter must
choose among myriad strategic choices in order to implement their international growth. These
choices are especially salient in firms that have adopted one or more forms of CE.

This paper examines the relationship between corporate entrepreneurship and
internationalization strategy (IS), and then analyzes the effect that both CE and IS have upon the
speed of internationalization and international performance. This theoretical analysis culminates
in a model (Figure 1) of internationalization that connects the four domains of CE with different
modes of internationalization, and offer insight into the effects that these connections may have
upon the speed and success of international expansion. In doing so this paper explains a
previously unexplained relationship between the various forms of CE and internationalization
strategies, and connects them to international performance.

Figure 1

This paper answers several recent calls for research and provides a deeply needed
contribution to the international entrepreneurship literature. In their recent assessment of the
state of corporate entrepreneurship, Dess, et al. (2003) stress the need to explore CE’s
relationship to international growth, specifically calling for research that examines whether firms
that employ different types of CE pursue specific types of internationalization strategies (Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003).

A recent theoretical assessment of the field of international entrepreneurship not only echoed this specific call for research, but also noted a distinct need for a more fundamental development in the field (Keupp & Gassmann, 2009). According to Keupp & Gassman, international entrepreneurship suffers from an imbalance of theoretical contributions that weigh more heavily from the international business field than from the field of entrepreneurship (Keupp & Gassmann). While this imbalance is likely due to the relative stage of development in the respective fields, the authors suggest that the field would benefit from the application of well-established theories and constructs from entrepreneurship to international entrepreneurship (Keupp & Gassman). This paper answers that call by examining the well-established phenomenon of Corporate Entrepreneurship in the context of international growth.

Finally, this paper provides much needed support for the contention that CE positively impacts not only domestic, but also international growth and performance. Only one prior study has examined the impact of CE upon international performance (Zahra and Garvis, 2000), and the relationship established in that study left several explanatory variables out of their analysis. This paper will build upon their findings by adding a theoretical argument for several explanatory variables that may enhance the understanding of that relationship.

This paper will begin with an explanation of the various forms of corporate entrepreneurship and discuss several modes of international expansion. In the course of this discussion I will propose several theoretical propositions between CE, IS and internationalization speed and performance. Finally, this paper will conclude with a discussion of the results and some suggestions for future research.
Theoretical Foundation

Corporate Entrepreneurship

Corporate entrepreneurship attracts continued attention due to its noteworthy influence upon performance in existing firms (Dess, et al, 2003). Within established businesses, CE stimulates both the expansion of existing endeavors and the creation of new initiatives (Ireland, Kuratko & Covin, 2002). This intra-business stimulus is achieved through the implementation of one or more processes that, when combined, evidence a firm-wide commitment to constant innovation with the goal of continually achieving and sustaining competitive advantage (Covin & Miles, 1999).

The processes underlying CE have been conceptualized into four well-established forms: sustained regeneration, organizational rejuvenation, strategic renewal, and domain redefinition (Dess, et al., drawing upon Covin & Miles, 1999). While by no means mutually exclusive, each of these processes contributes to the enhancement of firm-wide innovation and competition.

Sustained regeneration refers to a firm-wide commitment to “regularly and continuously introducing new products, or introducing products to new markets” (Covin & Miles). Firms exhibiting sustained regeneration typically possess firm cultures and systems that engender innovation and adaptability to frequent changes in the competitive environment (Dess, et al.; Covin & Miles). Acts of sustained regeneration would typically take the form of introducing new products to the market, or introducing products to new markets (previously untapped by the firm).

Organizational rejuvenation refers to a firm’s commitment to enhancing its internal processes and capabilities in order to compete. Here the CE activities are focused upon the firm
itself, and the goal is to innovate internal processes in a way that leverages a firm’s competitive advantage (Covin & Miles). Acts of organizational rejuvenation often entail making changes to a firm’s value chain or renewing aspects of a firm’s operations (Dess, et al., 2003).

In contrast to organizational rejuvenation, strategic renewal describes firms that focus upon its external environment in an effort to change how it competes with its competitors (Covin & Miles). Strategic renewal entails the adoption of a new strategic direction, one that enables a firm to better exploit its current strategic advantages and/or exploit new product/market opportunities (Ireland, Hitt & Vaidyanath, 2002). Acts of strategic renewal may take the form of altering a growth strategy from acquisition-based to strategic partnering or joint-ventures.

Finally, domain redefinition describes firms who seek first-mover advantages by identifying new domains that have been unexplored or underexploited (Dess, et al; Covin & Miles). Acts of domain redefinition may entail the introduction of a new genre of product rather than a new product in a currently existing market (for example, the introduction of the Sony Walkman, or more recently, the introduction of the introduction of MP3 players and iPod).

Each of the four forms of CE highlighted above share a firm-wide dedication to sustained innovation, both internally and with respect to their external environment. I next turn to the relationship between CE and International Growth.

**CE and International Growth**

As stated previously, these forms of CE are not mutually exclusive, and they may combine in any number of ways to engender innovation. Prior studies have shown that CE positively impacts firm growth and performance (Kazanjian, Drazin & Glynn, 2001; Zahra & Nielsen, 2002). However, only one known prior study has analyzed the effects of CE upon the international performance (Zahra and Garvis, 2000). Beyond this single study no research has
connected CE to international performance, and no prior studies have examined the connection between CE and the speed of internationalization.

The impact of CE upon the speed of internationalization may at first appear intuitive given that the locus of entrepreneurship generally encourage a consistent commitment to innovation and entrance into new markets. However, within large established firms, there has been some reliance upon a stage-like model of firm internationalization (Caves 1982). The stage theory of multinational development typically is described as an evolutionary process, wherein internationalization proceeds in an incremental, risk-averse series of stages (Oviatt and McDougall, citing Johanson and Vahlne 1990).

In contrast to this graduated model of international development, the model proposed herein describes internationalization being spurred by consistent commitment to innovation. Firms with high levels of CE seek out unexplored domains for firm product development and firm expansion, and this organizational aptitude may spur international growth at a greater rate than that predicted by traditional stage theories of large firm expansion.

In addition, several studies suggest that the speed of international growth may be a significant indicator of overall performance in a firm. For instance, the speed of international growth may lead to higher performance in expanding firms (Autio, Sapienza & Almeida, 2000). Oviatt and McDougall note that the faster a firm internationalizes, the faster it grows overall (both domestically and internationally) (Oviatt & McDougall, 2005). Given these findings this paper seeks to expand the CE literature by examining its effect upon the speed and success of internationalization. With this in mind I propose the following propositions:

P1: CE will positively correlate the with internationalization speed

P2: CE will positively correlate with international performance
P3: Internationalization speed will moderate the relationship between CE and international performance

**CE and Internationalization Strategy**

In addition to examining CE’s relationship to the speed and success of international expansion, this paper will add a further level of explanatory power the CE construct by describing how it influences internationalization strategy. An essential element of internationalization strategy is the mode of internationalization. This paper will develop a map connecting each form of CE with a particular mode of International expansion.

For firms contemplating expansion, the choice to pursue international expansion has never been easier. Technological advances in travel, communications and commerce have decreased the psychic distance of locations that previously may have appeared out of reach. Furthermore, firms that do choose to expand internationally have an increasing amount of choices at their disposal. The modalities of international expansion are vast, but for the purposes of this study a limited set of modes of international expansion have been selected. In particular, among the many modes of international expansion, this paper will focus upon exportation strategies, franchising, alliances, joint-ventures, and the establishment of self-sufficient subsidiaries. These modes have been chosen for their salience to this paper and their generalizability to other aspects of internationalization that will be touched upon in subsequent sections. International expansion strategies range in their level of convenience, their level of required commitment and their level of control (Yip, Biscarri, and Monti, 2000; Benito, and Welch, 1997).

For the purposes of this paper, the modes of internationalization have been categorized according to the degree of control maintained by the host firm over the foreign expansion (Yip,
et al. 2000). Low-control modes of internationalization will include exportation and licensing strategies, Intermediate-control modes will consist of franchising, joint-ventures and cooperative agreements. These approaches delegate relatively high levels of authority outside of the hands of the expanding firm. In contrast, firms may retain some of the control over their international expansion by engaging in high-control modes, such as initiating wholly-owned subsidiaries or foreign direct investments.

In choosing between the available modes of internationalization, a firm may base their decision upon many factors, such as firm resources, networks, industry and risk tolerance. The potential impact of CE upon mode of internationalization has not yet been considered. This lack of attention is significant because there is reason to believe that the different forms of CE may influence a firm’s choice of mode of internationalization. For instance, Firms that employ sustained regeneration processes may be more likely to choose low-control modes of internationalization due to their low capital and commitment requirements. This form of CE results in the rapid development of new and innovative products, and firms may only need to strategically export their goods in order to reap the maximum gains.

In contrast, firms focusing organizational rejuvenation upon their own internal operations, their CE efforts may have no influence upon their internationalization strategy given that the attention is focused purely on the internal processes of the established firm. Firms scoring high in domain redefinition or strategic renewal, on the other hand, may choose more the more permanent and capital-intensive modes of internationalization belonging to the medium- and high-control categories. These forms of CE typically take longer periods of time to manifest themselves in the firm (Covin and Miles 1999), and the corresponding level of commitment and
capital may be better reflected in these higher control categories of international expansion.

With this in mind I propose the following propositions:

P4(a): Firms scoring high in sustained regeneration will positively correlate with low-control modes of internationalization

P4(b): Firms scoring high in organizational rejuvenation will have an insignificant relationship with all modes of internationalization

P4(c): Firms scoring high in strategic renewal will positively correlate with medium- and high-control modes of internationalization

P4(d): Firms scoring high in strategic renewal will positively correlate with medium- and high-control modes of internationalization.

Mode of International Expansion and Internationalization Speed

The mode of international expansion may influence the speed with which a firm expands internationally. Low-control internationalization methods such as exportation strategies may take less time to arrange than high-control methods such as establishing international subsidiaries. This differentiation is important because it may imply that congruence between a firm’s CE profile and mode of international expansion plays a significant role in the speed with which it can achieve international presence. Given a firm’s goals, industry and competitive environment, this speed may be a high priority. With this in mind I propose that Internationalization strategy moderates the relationship between CE and Internationalization Speed:

P5: Internationalization Strategy moderates the relationship between CE and Internationalization Speed
Discussion and Implications for Future Research

This model provides several significant implications. To begin with, corporate entrepreneurship may be looked to as an alternative to the traditional stage theory explanation for international expansion of large established firms. Rather than engaging in international expansion as a result of a methodical, linear growth model, international expansion may instead be driven by the entrepreneurial approach of a given firm. The behaviors underlying the CE construct belie an orientation to international growth that may be contrary to evolutionary stage-like development, and thus may be looked to for explanations in certain circumstances.

Secondly, the distinct domains of CE may suggest different paths to internationalization. At its heart, entrepreneurship is a concept heavily reliant upon strategic concerns. The success of the strategic choices made by corporate entrepreneurs within large organizations may depend heavily upon their congruence with the modality they choose to employ. With respect to international expansion, the choice of the method in which they cross borders may be more or less successful given its comportment with the domain of CE being engaged. It bears noting that this model is, by its very nature, oversimplified. Further, it is highly likely that firms engage in not only a mixture of CE practices, but also of modes of international expansion. However, despite the oversimplified nature of the model, the inherent connections remain important guideposts, which if adhered to, may promote greater success in internationalization.

Thirdly, the connection between CE and not only international expansion, but also the speed of internationalization provides a unique vantage point in which to view entrepreneurial behavior within established firms. While the literature has established clear links between CE and new product development and firm expansion in general, the addition of international
expansion to the discussion injects a new set of strategic variables that warrant attention by both practitioners and the literature. While exploring new domains and expanding new products domestically may naturally present a set of strategic questions, the expansion across borders raises a great deal more questions—including a central question of the level of retention of control of the mode of international expansion that has been touched upon in this paper.

The above implications suggest a theoretical model that is ripe for empirical validation. Examining the propositions set forth within this paper through empirical study would potentially validate the claims that lie herein, and provide support for further theoretical development. In particular, the connection between CE and mode of international expansion appears most salient and most in need of empirical investigation. In this vein, it may be prudent to expand the modes of internationalization to include other strategies. Likewise it may be fruitful to categorize the methods of international expansion by variables other than the degree of control retained by the host firm. These alternative interpretations may add force to the model established herein, or change the variables included in the model significantly.
References


Appendix

Figure 1.
Economic Analysis of the Impact of the Public-private Matching Fund Programs using Firm-level Data

by Jeong-Dong Lee, Youngkyu Kim and Inha Oh

In the intermediate goods industry, which is comprised largely of small- and medium enterprises, the government can use a matching fund to execute policies such as providing supporting funds to promote firms’ innovative activities. The objective of this study is to perform an empirical analysis of the additional effects of government support for innovation activities using a matching fund in the intermediate goods industry. Specifically, the growth of firms is analyzed. Methodologically, to deal with the selectivity issue, we adopt a propensity score matching estimator. We also investigate the performance of the matching fund according to private share. As a result, the supported firms invested larger amounts in R&D expenditures and were observed to procure external financing through an overall improvement of their level of reliability. However, the results showed that it was not further connected to improvements in business performance. Moreover, although the results showed the positive impact of private investment in the matching fund on assets and R&D expenditures, there was no significant relationship between sales and fixed assets.
**Introduction**

Innovation activities are one of the major elements in the growth of firms. Firms become more competitive through innovative activities such as developing the performance of products or services, and these activities ultimately create added value and increase a firm’s market share (Giuliani, et al., 2005). However, external financing, which can be financing provided to a firm for innovation activities, has a higher tendency of under-investment within the loan market due to asymmetric information and spillover effects. In particular, it is hard to expect long term and large scale investments for small and medium enterprises (SMEs) or the intermediate goods industry, which has relatively poor condition for the innovation activity (Carpenter and Petersen, 2002; Lerner, 2002). Therefore, the government has made an effort to reduce the under-investment of innovation activities by implementing diverse support policies (Bendick Jr and Egan, 1986).

However, indiscriminate intervention of the government can also cause asymmetric information problems between government and supported corporations, including adverse selection, moral hazard, and the crowding-out effect (Cowling, 1998; Cressy and Toivanen, 2001). As a means to combat these problems, the government creates a matching fund with private investment corporations such as venture capital (VC) firms. In this matching fund, the VC’s role is to scout out select firms that are expected to yield high investment profits and, at the same
time, to coach that investment to be connected with the growth of the firms (Baum and Silverman, 2004).

The main purpose of this study is to analyze the additional effects of this government support. First, this study analyzes whether the support policies of the government aimed at intermediate goods corporations have the additional effect of improving the performances of participating corporations compared to those that did not receive support. Second, this study examines the effect of VC investment on the matching fund. In order to do so, we classified the ratio of government support and VC investment within the matching fund. Additionally, we observed the difference in performance according to the changes in private share.

In the case of Korea, the “Components and Materials R&D Program” is a typical example. The Korean government has conducted this R&D support program for SMEs in the intermediate goods industry since 2000. Around 45 to 80 SMEs have been selected for the program every year, and the firms have received financial support from public-private matching fund.

As is well known, the central issue of empirical research that estimates the performance of government policy is how to control the selection bias. Methodologically, reliable policy evaluation should solve the selection bias problem, which implies that public funding may be allocated to proposals judged in advance with a high probability of success. To deal with the selectivity issue, we adopt a propensity score matching (PSM) estimator. PSM methodology has been used to evaluate the government R&D support program in recent empirical studies to control for selection bias (Almus and Czarnitzki, 2003; Duguet, 2004;
Loof and Heshmati, 2005; Czarnitzki and Licht, 2006; Gorg and Strobl, 2007). Additionally, five-year performance, which includes three years of program participation and two years after the program, is estimated with consideration for the time-lag between innovation activity support and the firm’s performance.

The remainder of the paper is organized in the following manner. In chapter 2, an overview of the effects of government innovation policies and a brief introduction of the Korean Components and Materials R&D Program are presented. In chapter 3, we look at PSM methodology to control for selection bias, and in chapter 4, the definition of the data and the variables are explained. In chapter 5, we describe the additional performance of the program as a result of the empirical analysis and the additional contribution of the private sector. Finally, chapter 6 contains concluding remarks and a summary of the discussion and main implications of this paper.

**Background**

**Government support for innovation activities**

Firms carry out innovation activities by utilizing internal and external financing. Firms decide to invest money in innovative activities only if the marginal rate of return is larger than the marginal cost of capital (David, et al., 2000). However, due to asymmetric information problems in the loan market, the marginal cost of capital is higher for external investors, hence resulting in a lower possibility of inducing external investors to fund firms’ innovation activities.
Himmelberg and Petersen (1994) showed that the innovation activities of high technology SMEs with high expectations of asymmetric information are funded by internal financing rather than external financing. Moreover, the new knowledge as a result of these innovation activities tends to have elements of non-excludability and non-rivalry, resulting in spillover effects and a natural linkage to reduced external financial investment.

Therefore, the government intervenes in the market and establishes policies to reduce asymmetric information and uncertainty and alleviate the under-investment of firms’ innovation activities. Tax support, technology development finance support, and credit guarantees are some examples of intervention policies. However, since firms do not provide all of the necessary information, it is exposed asymmetric information, which results in adverse selection by the government or the occurrence of moral hazard in corporations (Arrow, 1962; Van der Meulen, 1998). In particular, the issues of adverse selection and moral hazard can be more prevalent in high tech industries, and government support may not be effective as a result (Stiglitz and Weiss, 1981; Myers and Majluf, 1984).

This is essentially a problem of poor choice due to lack of information and poor monitoring of the support program. One of the solutions to this problem is to create a matching fund along with a VC firm that has distinguished information processing and monitoring abilities. In this system, the VC makes appropriate decisions regarding the selection of firms with superior innovation ability, monitoring, determining whether performances are on the right track, and providing business consulting services on behalf of the government if necessary.
The role of the VC is based on providing the abilities that the government lacks. VC can create a leverage effect since the government investment is added to their own investment, accordingly investing in a firm’s innovation activities that were difficult to invest in the past. Therefore this form of support lures private investment and minimizes the crowding out effect that is induced by government support (David, et al., 2000; Hwang and Kim, 2000).

This discussion also applies to the intermediate goods industry, which is the subject of this study. First, the intermediate goods industry is generally based on high technology, and in terms of innovation activities, there is high uncertainty in both technology and markets. Consequently, in many cases, the functionality of the technology financing market is impeded and requires government support. Second, the intermediate goods industry does not have a significant ability to procure internal financing since the proportion of start-ups or SMEs is higher than that of other sectors. Although the necessity of utilizing external financing for innovation is more imminent than in any other sector, loan capital funding is difficult due to small scale collateral, and the possibility of inducing investment is lower due to the high uncertainty. Therefore, the intermediate goods industry is an area that requires government support. Third, the intermediate goods industry is located in the middle of the value chain, which means that it can create a large ripple effect on up- and/or down-stream industries, universities, and public research institutions when innovation is performed successfully. In terms of innovation policies, the intermediate goods industry is an area that can provide maximum social welfare benefits. In this regard, Lee and Park (2006) discussed the
characteristics of the intermediate goods industry, which requires government support from the perspective of its innovation system.

This characteristic of the intermediate goods industry clearly shows that it requires government support for innovation activities. As pointed out earlier, the method government support should be determined with caution due to the problem of adverse selection and moral hazard resulting from the asymmetric information. The Korean government has created innovation support programs using matching funds that invest in cooperation with VC to minimize this potential problem. The Components and Materials R&D Program is an example of such a support program. The characteristics of this program are discussed in the next section.

The Components and Materials R&D Program of Korea

The Components and Materials R&D Program of Korea is a program that supports R&D financing for the innovation of technology in the pre-competition phase by corporations in the intermediate goods industry. The evaluation structure of the support program is as follows.

![Program Evaluation Structure](image)

*Source: Edited from information excerpted from Korea Ministry of Knowledge Economy*

As seen in **Figure 1**, a panel of experts evaluates whether a submitted
proposal is technologically valid in the phase 1. Additionally, the focus of this phase is the request of government support, whether the proposed technology is at the pre-competition phase or there is a clear indication of market or innovation system failure. In phase 2, the investors, including the VC, evaluate the commercial value of the proposed technology. When the VC states its investment intentions toward technology that has passed phase 1, financial support is provided by the program. The fund for proposed technology development items is composed of VC investment financing, government technology development subsidies, and internal corporate expenditure.

The above business structure has the following features. First, the technological and political validity evaluation in phase 1 is conducted from the public perspective. The commercial potential evaluation in phase 2 is conducted from the investor’s perspective. By separating the host and the content of the evaluation, the VC is relieved of its burden of technological reviews, and the government can utilize the commercial judgment abilities of the private sector to minimize the problem of information asymmetry. Second, VC investment and corporate expenditure by the supported firm is a precondition for this program. This precondition is meant to diminish the crowding out effect of government support. Moreover, corporate expenditure by the supported company is intended to prevent moral hazard.

Table 1 Composition of Support of the Program

<table>
<thead>
<tr>
<th>(million $)</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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</tbody>
</table>
Table 1 displays the structure of support finances from this program until 2006, which is the analysis period of this study. The proportion of VC’s investment increases with time, which shows that this program is recognized as a good investment target.

Considering the structural characteristics of this program—both the government and the private sector support the fund in together—it is similar to the “Yozma program” in Israel (Avnimelech and Teubal, 2003). However, in the “Yozma program,” all funds are injected in the form of investment, whereas in this program, government support takes the form of subsidies rather than investment.

**Methodology**

This study intends to analyze any additional performance gained from participating in government programs. In this regard, Oh et al. (2008) defined the
additional program effect as “what would have happened to those who, in fact, did receive treatment, if they had not received treatment.” As it is impossible to predict the effect of those untreated by the program is impossible, it is counterfactual. Therefore, the business effect can be defined as the “factual performance” versus “counterfactual performance.” This is referred to as ATT (Average effect of Treatment on the Treated), and it can be expressed as the following equation.

$$\text{ATT} = E$$
High-Tech Start-ups in “traditional” industries – founding opportunities for women in and nearby the chemical industry in Germany

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The chemical industry in Germany is a traditional industry characterized by well established, large companies which faced fundamental changes during the last two decades. It is not only an important innovation provider for numerous other industry sectors, it is also essential for new emerging industries like biotechnology or nanotechnology. There is a high and growing number of small and medium-sized businesses developing and offering knowledge intensive services and products to the chemical industry and at the interface to other high-technology sectors.

Besides a detailed and recombinig analysis of statistical data retracing to different sources, a qualitative study was conducted to gain new findings about prospects and barriers for (women) entrepreneurs in the chemical industry and related high-technology sectors. The results of the twofold analysis show a high but often unused potential for start-ups. Diversification, alteration of traditional structures and the emergence of next generation technology sectors offer founders new perspectives and opportunities. On the other side the results of the non-standardized interviews with experts demonstrate a high number of barriers and disadvantages for founders, especially for female chemists.

Keywords: chemical industry, start-ups, women entrepreneurs, high-technology, Germany
Measuring the Entrepreneurial Attitude of the University Students Studying in Turkey and Cyprus

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Keywords: Entrepreneurial attitude, Cyprus, Turkey

The major aim of this study is to find out the factors which may influence the entrepreneurial attitude of the third and the fourth year university students studying in Turkey and Cyprus. Although similar studies mainly in Europe and US were carried, our study will be the first in two different cultural contexts.

Explaining human behavior in all its complexity is a difficult task. Social and personality psychologists have tended to focus on an intermediate level, the fully functioning individual whose processing of available information mediates the effects of biological and environmental factors on behavior (Ajzen, 1991). However, majority of the researches related to measuring entrepreneurial attitude focused on personal and demographic characteristics, or attitudinal approaches (Krueger and Carsrud, 1993).

Taking more risk can be one of the personal characteristics (Gürol and Atsan, 2006), focusing on control (Brockhaus, 1982; Brockhaus and Horwitz, 1986), desire to be successful (Chell, 2001), desire to be independent (Shane et. Al, 1991), recognition (Shane et. al). A model of entrepreneurial attitude will be proposed, if the findings will be satisfactory.

Authors will look for differences and similarities between these two environments and also between two major disciplines (Faculty of Business and Economics – Faculty of Engineering).

Sampling frame of the study will be the third and fourth year students in the Faculty of Business and Economics and the Faculty of Engineering of the Universities established in Turkey and Cyprus.
The effects of limited staff capacity and capability of small firms on their access to official foreign trade promotion

Christian Hauser*
Arndt Werner**

Abstract
Small businesses face size-specific barriers with regard to the development of foreign markets. To counteract these structural disadvantages, governments worldwide have created a large number of different institutions and instruments to support the internationalisation of small firms. Grounded in the theoretical framework of the resource-based view, our study analyses the participation patterns of enterprises in foreign trade promotion schemes with respect to firm size. Our study is based on regression analysis using data obtained by an original survey covering 615 German enterprises from all sectors. Our findings provide strong evidence that (1) small businesses use foreign trade promotion programmes to a lesser extent than their larger counterparts and that (2) the limited staff capacity and capability of small firms, which in fact should be counter-balanced by the public promotion schemes, is the main reason why the support measures are not being accessed by small enterprises efficiently.

Keywords: Internationalisation, Resource-based View, Small Businesses, Foreign Trade Promotion, Germany
JEL Classification: D83, L25, L26, L53, M16

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1. Introduction

The small business literature has identified resource and management limitations as one of the main weaknesses of small firms. From the perspective of the resource-based view, the lack of resources and skills needed for the entry into and development of foreign markets might also explain the weaker orientation towards international markets of small enterprises (Preece et al. 1999, Verwaal and Donkers 2001, Knight 2001, Haahti et al. 2005). According to official data only 10.7 % of all German small firms but 72.8 % of all German larger enterprises are involved in exports (Federal Statistical Office 2009). Furthermore, larger enterprises are also much more likely to use other forms of internationalisation than small businesses, such as international co-operation, international licensing or foreign direct investments (Haunschild et al. 2007; Lo et al. 2007; European Commission 2007).

Acknowledging the size-specific disadvantages of small businesses, it is the purpose of governments worldwide to remove the barriers which these firms experience so that they can achieve their full growth potential in international markets (OECD 2008). While larger enterprises are seen to possess the required resources to enter and develop foreign markets on their own, many small enterprises are believed to be able to realize their international market potential only with the help of such public support. Thus, it is the explicit objective of the official foreign trade promotion to foster the internationalisation of small enterprises by counterbalancing their typical lack of resources (Deutscher Bundestag 2003; Deutscher Bundestag 2005).

Previous fundamentally descriptive studies indicate that small businesses are making less use of the public foreign trade promotion programmes than larger enterprises do (Moini 1998; Lau et al. 2005, Haunschild et al. 2007). Surprisingly, the circumstances and the reasons for this – from the government’s point of view – unintended and unwanted results have not been analysed by academic research in depth. Moreover, these findings are especially alarming
because a recent study by Hauser and Werner (2009) provide evidence that the use of foreign trade promotion has a positive impact on the international performance of small businesses, while in the case of larger companies it has no significant effect. Thus, our paper extends the existing literature by investigating (1) if small firms do participate in foreign trade promotion schemes to a lesser extent and if so, (2) what causes the lower participation rate of small enterprises.

To summarise the results, our empirical analysis finds strong evidence that (1) small firms use foreign trade promotion programmes to a lesser extent and that (2) the lack of specialised in-house resources of small businesses, which in fact should be counter-balanced by the public promotion schemes, is the main reason why the support measures are not being accessed by small enterprises in the first place.

The rest of the paper is organised as follows: The next section discusses briefly the relevant literature on foreign trade promotion and outlines the political objectives of the public support scheme. Based on the existing literature and the theoretical framework of the resource-based view, hypotheses are proposed with regard to the use of foreign trade promotion by small businesses. The subsequent section deals with the empirical study, discussing the data, variables, data analysis method and the results. Finally, some concluding remarks and recommendations including concrete policy options and practical measures are formulated which could feasibly contribute to an improvement of the foreign trade promotion for small firms.

2. Theoretical Background and Hypotheses

A relatively large body of research exists, which has analysed the effectiveness of promotion measures for the internationalisation of firms (Wilkinson and Broughers 2006). One line of research has attempted to verify a causal relationship between official foreign trade promotion activities and the export performance of a jurisdiction (Coughlin and Cartwright 1987; Wilkinson and Broughers 2000). Recent findings on macro-level indicate that the promotion ac-
tivities can positively stimulate national exports (Lederman et al. 2009). But, up to the present
time, the effects of the promotion schemes on macro-level remain inconclusive. Additionally,
as a consequence of the fact that the promotion services are provided on a company specific
basis, in recent years academic research focused also on examining the effects of the pro-
grammes on firm-level (Lages and Montgomery 2001; Gillespie and Riddle 2004; Hauser and
Werner 2009).

Another line of studies has examined the firms’ awareness, usage and perceptions of the use-
fulness of foreign trade promotion instruments as an indication of their outcome (Vanderleest
1996; Haunschild et al. 2007). Although these tests give no evidence of the impact of the in-
struments themselves, they can be seen as a helpful tools for programme planning, assessment
and decision-making (Francis and Collins-Dodd 2004), since they can be used to evaluate the
transparency and accessibility of the promotion scheme.

Foreign trade promotion measures are provided to help small businesses to overcome real or
perceived barriers to internationalisation. In Germany, various types of instruments have been
developed during the last few decades that are provided free or for a modest fee through pub-
lic, semi-public or private organisations. As mentioned above, the government assumes that
larger enterprises possess the required resources to enter and develop foreign markets on their
own. Small firms, on the other hand, are defined as the principal target group of the support
efforts because they are believed to be able to overcome barriers to internationalisation only
with the help of public support. Hence, it is the explicit goal of the promotion schemes to
counter-balance size-specific disadvantages of small firms by providing them with external
areas of competency, capabilities and resources, such as information, networking, training or
finance, to deal with the special requirements of foreign trade activities (Gençtürk and Kotabe
2001).
Challenging this explicit governmental objective the results of several, basically descriptive studies indicate that small firms are making less use of the support programmes than larger enterprises do (Moini 1998; Lau et al. 2005; Haunschild et al. 2007). Faix et al. (2003) conclude (1) that the larger the enterprise, the more likely it is to apply for subsidies, and (2) that the available financial support is mainly absorbed by larger enterprises. Surprisingly, the circumstances and the reasons for these – from the government’s point of view – unintended and unwanted results have not been analysed by academic research in depth. Thus, up to this point in time, it remains unclear if small businesses actually do make less use of the support measures and if so, why they participate in foreign trade promotion schemes to a lesser extent. Hence, based on the descriptive results of the existing literature we hypothesize:

**H1: Small businesses obtain less frequently support from foreign trade promotion than larger enterprises do.**

Foreign trade promotion is available only on application. Thus, it is necessary to take screening efforts and costs into account. Hence, a firm that wants to use public support needs certain in-house resources and capabilities to identify relevant promotion measures and to apply for them. Now, the theoretical framework of the resource-based view considers that every enterprise is unique with regard to the human and physical resources it controls. It assumes that the specific internal characteristics and competencies of firms determine why enterprises make distinct strategic and operative choices that lead to different performances. These include, among other things, the firm’s management skills, its organisational processes and routines, and the information and knowledge it possesses. Thus, the resource approach can help to explain how the existence of specific in-house capabilities and resources influences a firm’s ability to adapt successfully to its economic environment (Barney et al. 2001, Knight 2001,
Esteve-Pérez and Mañez-Castillejo 2008, Wolf 2009). As often emphasized in the literature, small enterprises are typically managed by their owners or their family members (Coviello and McAuley 1999, Ritchie and Brindley 2005, Werner and Kay 2006). The dominating position of the entrepreneur is the reason that the decision-making power is typically concentrated in his hands and that the management structure remains in general quite informal (Fernández and Nieto 2006, Leonidou et al. 2007). The strong centralisation of all entrepreneurial decisions often leads to an overload of management resources which therefore frequently leads to neglecting of long-term planning (Kayser and Wallau 2003, Li et al. 2004). Moreover, usually all employees are strongly relied upon to run the day-to-day operations. Thus, small enterprises often have difficulties in investigating on additional topics such as public support measures, without neglecting the day-to-day business (Gankema et al. 2000, Leonidou 2004, Li et al. 2004). In the opinion of many scholars, the limited staff capacity and capability of small firms inevitably leads to a fundamental lack of available information, as the time, knowledge and experience are missing which is necessary to search and analyse the relevant data purposefully (Korhonen et al. 1996, Knight 2001). Thus, grounded in the theoretical framework of the resource-based view we hypothesize:

\[ H2: \text{The existence of a person or department specialised in foreign trade affairs has a significant positive impact on the usage of foreign trade promotion measures of small businesses.} \]

As mentioned above, from the resource-based view, it can be argued that the ability of an enterprise to apply for official foreign trade promotion programmes depends on its capacities, competencies and resources (Westhead et al. 2001). Hence, the characteristic organisational structure and managerial style of small firms indicate that they might not possess enough in-
house capabilities and resources needed to efficiently screen the promotion scheme. The existing small businesses literature indicates that small firms are characterized by a general lack of personnel resources compared to larger firms (Knight 2001, Hollenstein 2005). For instance, frequently small enterprises do not employ specialists with formal economic or legal education and relatively few of them have at their disposal a middle management level or specialised administrative departments (Nummela et al. 2004, Fernández and Nieto 2005, Fernández and Nieto 2006). So, based on the findings of the existing literature we expect that:

\( H3: \) Small businesses have less frequently a person or department specialised in foreign trade affairs than larger enterprises do.

3. Data Analysis

3.1 Survey sample and descriptive results

To examine the question whether or not small firms possess the resources necessary to access foreign trade promotion, a quantitative-empirical survey was conducted with 615 German enterprises participating in the study in 2005.

First, we developed a 17-item measure consisting of foreign trade promotion programmes that represent the core set of widely available foreign trade promotion measures. The programmes considered in this study are (1) business seminars, (2) company pools, (3) cooperation symposia abroad, (4) export and FDI finance credits, (5) foreign trade consultancy programme, (6) German Centres, (7) Hermes export credit guarantees, (8) how-to-do-business-abroad publications and information offers, (9) investment guarantees, (10) joint participations in trade fairs abroad, (11) marketing assistance programme, (12) matchmaking events abroad, (13) political support for projects abroad, (14) promotion of joint ventures, FDI and cooperation, (15) trade missions and entrepreneur trips, (16) training of foreign executives and staff, (17) services
provided by Federal Government embassies and/or by representative offices of the State Governments abroad. To test the effect of firm size and limited in-house resources on the usage of a foreign trade promotion schemes, we include as our dependent variable a dummy variable taking the value one if the firm has participated in one of these programmes and zero if otherwise.

Second, we use number of employees as our first major explanatory variable. We define small businesses as firms that have less than 50 employees. This threshold reflects the fact that enterprises employing over 50 persons tend to possess a more formal organisational and managerial structure and a more decentralised decision-making process. The inferior restrictions in staff capacity and capability allow those firms to have more time and skills to deal with specific topic such as official promotion schemes, without neglecting the day-to-day operations (Obermann 1996).

Third, we use the existence of a person or department specialised in foreign trade affairs as a proxy for in-house resources and capabilities as our major explanatory variable. In the literature several approaches have been proposed to measure the resources necessary to deal with the different issues regarding the internationalisation of a firm. Some have used number of employees or size of sales as a proxy for resources (Calof 1994) others focused on more specific resource issues, such as available management time, financial means or R&D-spending (Abdel-Malek 1978, Kirpalani and Macintosh 1980, Preece et al. 1999). By using the existence of a person or department specialised in foreign trade affairs as a proxy for in-house resources and capabilities we follow a more specific approach. The existence of such specific personnel indicates that the enterprise uses considerable resources to deal with questions concerning its international activities and that staff members possess the necessary expertise and time to identify relevant promotion measures and to apply for them.
Fourth, to check whether common method bias according to Podsakoff and Organ (1986) is of concern, a Harman’s one-factor test was performed. Common method bias is assumed to exist if a single factor emerges from unrotated factor solutions, or if a first factor explains the majority of the variance in the variables (Podsakoff and Organ 1986). The results of the unrotated factor analysis show 14 factors with eigenvalue more than one, where the maximum variance explained by one single factor is 8.5%. Thus, the results of Harman’s single-factor test gives evidence that this type of bias is not of concern in our study.

### Table 1
**Description of Variables**

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Description</th>
<th>Mean (Std.dev)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme</td>
<td>Have you used any foreign trade promotion programme in the past? [1=yes; 0=no]</td>
<td>0.468 (0.499)</td>
</tr>
<tr>
<td>Firm_Size</td>
<td>Firm Size (less than 50 employees) [1=yes; 0=no]</td>
<td>0.623 (0.485)</td>
</tr>
<tr>
<td>Foreign_Dep</td>
<td>Does your firm have a person or department specialised in foreign trade affairs? [1=yes; 0=no]</td>
<td>0.367 (0.483)</td>
</tr>
<tr>
<td>Empl_Suc</td>
<td>Development of employment in the last two years? [1=rise; 0=else]</td>
<td>0.348 (0.476)</td>
</tr>
<tr>
<td>Geo_Con</td>
<td>Geographic concentration of industry at regional level [1=very high; 0=else]</td>
<td>0.218 (0.413)</td>
</tr>
<tr>
<td>Branch_Int</td>
<td>Degree of internationalisation in comparison to the sector-specific average? [1=significant above; 0=else]</td>
<td>0.237 (0.426)</td>
</tr>
<tr>
<td>Rel_Abroad</td>
<td>Is your company doing business abroad? [1=yes; 0=no]</td>
<td>0.880 (0.326)</td>
</tr>
<tr>
<td>Ind_Manu</td>
<td>Branch of industry: Manufacturing [1=yes; 0=other]</td>
<td>0.450 (0.497)</td>
</tr>
<tr>
<td>Ind_Trade</td>
<td>Branch of industry: Trade [1=yes; 0=other]</td>
<td>0.107 (0.318)</td>
</tr>
<tr>
<td>Ind_Serv</td>
<td>Branch of industry: Services [1=yes; 0=other]</td>
<td>0.291 (0.455)</td>
</tr>
<tr>
<td>Ind_Craft</td>
<td>Branch of industry: Craft [1=yes; 0=other]</td>
<td>0.059 (0.238)</td>
</tr>
<tr>
<td>Ind_Other</td>
<td>Branch of industry: Other [1=yes; 0=other] (=reference)</td>
<td>0.093 (0.289)</td>
</tr>
</tbody>
</table>

Number of cases N=615
Table 1 presents the definitions, means and standard deviations of variables included in our analysis. In total, 47% of the surveyed enterprises have used foreign trade promotion measures. 62% of the surveyed enterprises are small firms according to our definition and 74% of the enterprises are either in the manufacturing or in the services sector. 26% are in other branches, predominantly in the trade sector. 88% of the enterprises do business abroad and roughly one fifth of the enterprises state that the geographic concentration of industry at regional level in their region is very high. Nearly one quarter of the enterprises indicated that their degree of internationalisation is significant above the sector-specific average. A rise in the development of employment in the last two years prior to our survey was confirmed by 35% of the firms and 37% of them indicated that they retain a specific person or department to manage their international operations.
Table 2
Two-Sample Tests of Group Proportions by Firm Size (Small vs. Larger Firms) for the Variables included in the Econometric Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Small Firms Mean (Std. Dev.)</th>
<th>Larger Firms Mean (Std. Dev.)</th>
<th>Test of ( H_0 ): Difference in means = 0 (z-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme</td>
<td>0.3969 (0.4962)</td>
<td>0.5862 (0.4626)</td>
<td>4.561***</td>
</tr>
<tr>
<td>Foreign_Dep</td>
<td>0.2324 (0.4229)</td>
<td>0.5905 (0.4928)</td>
<td>8.929***</td>
</tr>
<tr>
<td>Scheme if Foreign_Dep(^1)</td>
<td>0.6742 (0.4713)</td>
<td>0.6788 (0.4686)</td>
<td>0.073</td>
</tr>
<tr>
<td>Scheme if no Foreign_Dep(^1)</td>
<td>0.3129 (0.4645)</td>
<td>0.4526 (0.5004)</td>
<td>2.487**</td>
</tr>
<tr>
<td>Empl_Suc</td>
<td>0.3315 (0.4714)</td>
<td>0.3750 (0.4852)</td>
<td>1.095</td>
</tr>
<tr>
<td>Geo_Con</td>
<td>0.2037 (0.4032)</td>
<td>0.2414 (0.4288)</td>
<td>1.098</td>
</tr>
<tr>
<td>Branch_Int</td>
<td>0.2063 (0.4052)</td>
<td>0.2888 (0.4542)</td>
<td>2.331**</td>
</tr>
<tr>
<td>Rel_Abroad</td>
<td>0.8277 (0.3782)</td>
<td>0.9655 (0.1829)</td>
<td>5.093***</td>
</tr>
<tr>
<td>Ind_Manu</td>
<td>0.3029 (0.4601)</td>
<td>0.6940 (0.4618)</td>
<td>9.449***</td>
</tr>
<tr>
<td>Ind_Trade</td>
<td>0.1540 (0.3615)</td>
<td>0.0302 (0.1714)</td>
<td>4.811***</td>
</tr>
<tr>
<td>Ind_Serv</td>
<td>0.3786 (0.4857)</td>
<td>0.1466 (0.3544)</td>
<td>6.140***</td>
</tr>
<tr>
<td>Ind_Craft</td>
<td>0.0783 (0.2690)</td>
<td>0.0259 (0.1591)</td>
<td>2.686***</td>
</tr>
<tr>
<td>Ind_Other</td>
<td>0.0862 (0.2809)</td>
<td>0.1033 (0.3052)</td>
<td>0.717</td>
</tr>
<tr>
<td>Number of cases(^1)</td>
<td>383 (0.6228)</td>
<td>232 (0.3772)</td>
<td></td>
</tr>
</tbody>
</table>

\(^*\), \(^**\), \(^***\) denote statistical significance at an error level of 10, 5, and 1 percent.

\(^1\) Note: Number of cases for "Scheme if (no) Foreign Department": \( N_s = 89 \) (294), \( N_l = 137 \) (95).

Table 2 compares small and larger firms. The analyses yield a number of significant differences. First, small firms make less use of support programmes than larger enterprises. While merely 40% of the surveyed enterprises with less than 50 employees obtained some kind of
public support, nearly 59% of the larger enterprises made use of foreign trade promotion programmes. In addition, the descriptive analysis shows that larger enterprises are much more likely to possess a person or department specialised in foreign trade affairs than small businesses are. Nearly three-fifth of the larger enterprises possess specific personnel but only less than one quarter of the surveyed small firms do.

With the exception of ‘development of employment’, ‘geographic concentration of industry at regional level’ and ‘other industry’, small firms differ significantly from larger ones. More larger enterprises are doing business abroad (small firms 83%, larger firms 97%) and are in the manufacturing sector (small firms 30%, larger firms 69%). Furthermore they are much more likely to have a significantly higher degree of internationalisation in comparison to the sector-specific average than small firms are (small firms 21%, larger firms 29%). On the other hand, more small enterprises are doing business in the trade sector (small firms 15%, larger firms 3%), the service sector (small firms 38%, larger firms 15%) and craft sector (small firms: 8%, larger firms 3%).

Two observations are noteworthy: the descriptive analyses reveals that the enterprises with personnel specialised in foreign trade affairs use foreign trade promotion schemes to the same extent, irrespective of firm size (small firms: 67%, larger firms 68%, the test of difference in proportions is not significant). On the other hand, if the enterprises have no department specialised in foreign trade affairs, small firms seem to use foreign trade promotion schemes to a much lesser extent: Average promotion usage of small firms without specialised personnel is 31% compared to 45% of larger firms.

The results of the descriptive analysis are somewhat alarming. They indicate that small firms – the supposed principal target group of the public support efforts – generally make less use of the promotion programmes than larger enterprises. These results are in line with the findings of the existing descriptive studies mentioned above. Taken together with the observation
that the percentage of small enterprises that have used any support measures is a lot higher with small businesses with personnel specialised in foreign trade affairs (67%) than with small firms without such specific capacities and capabilities (31%), can be taken as a first hint that limited in-house resources of small businesses may negatively influence their access to official foreign trade promotion schemes.

Yet, the descriptive evidence presented does not reveal the extent to which the variables discussed might be interrelated. Rather the descriptive findings may be – at least in parts – the result of other internal and external intervening variables. For example sector-specific differences or the orientation of an enterprise towards internationalisation or growth might affect its firm size, the in-house resources it possesses as well as its behaviour regarding the usage of promotion services. Thus, multivariate analyses have to be applied to reveal the ceteris paribus effects of firm size and internal resources on the foreign trade promotion usage of an enterprise.

3.2 Estimation strategy

In the following section we will investigate the ceteris paribus effects of limited in-house resources of small businesses on their access to official foreign trade promotion while other internal and external intervening characteristics and factors of the firm are controlled. Altogether we estimate four econometric models using regression analysis.

The dependent variable in all models is the usage of any foreign trade promotion scheme in the past (“scheme”). As described above, the dependent variable is a binary variable taking the value one if the firm participated in foreign trade promotion schemes and zero otherwise. Since the variable “scheme” is an indicator variable, we estimate binary probit models (using robust variance estimators). Beside our two major explanatory variables (small firm size and the existence of a person or department specialised in foreign trade affairs as a proxy for in-house capabilities and resources), we include a set of control variables that are known to af-
fect the usage of foreign trade promotion - but which are not included in our hypotheses. The literature has identified various factors that could stimulate or impede the participation in promotion schemes.

First, Foreign trade promotion is provided by public institutions to foster the internationalisation of small businesses. So, a firm’s orientation towards internationalisation might affect its behaviour regarding the awareness and usage of such promotion services. Research into export promotion has identified that enterprises having different degrees of international involvement also have different needs (Czinkota 1996; Diamantopoulos et al. 1993; Naidu and Rao 1993; Moini 1998) and face different obstacles (Kotabe and Czinkota 1992) that have to be addressed by the public programmes. To account for these possible differences we control for the factors such as if a company is doing business abroad and for its degree of internationalisation in comparison to the sector-specific average. Furthermore, the orientation of an enterprise towards growth might also affect its propensity to internationalise its business activities and therefore increases its need for public promotion services. The development of the number of employees in the last two years was chosen as a proxy for the orientation of an enterprise towards growth.

Beside these organisational factors the literature identified that also industry factors could stimulate or impede the internationalisation of an enterprise and subsequently the perceived importance or need for foreign trade promotion schemes (Al-Laham and Souitaris 2008). Academic research has documented that the internationalisation of enterprises from the service sector may differ in comparison with firms of the manufacturing sector (Buckley et al. 1992; Lehmann 2008) and that enterprises from crafts are generally mainly domestic market oriented (Müller 2004; Haunschild et al. 2007). Furthermore, with regard to the foreign trade promotion schemes it can be noted that they focus mainly on the needs of the manufacturing
sector while the specific requirements of the service sector are often disregarded (Lehmann 2008). Thus, to account for possible differences between the sectors we control for sector-specific differences. Research on the correlation between the geographic concentration of industry at a regional level and internationalisation is still limited. Yet, the existing literature indicates that enterprises embedded in regional clusters can benefit from the characteristics of clusters. E.g. knowledge spillovers or signaling effects can help small enterprises to master their internal resource restriction (Dunning 1998; Zain and Imm Ng 2006; Al-Laham and Souitaris 2008).

Furthermore, we focus only on German enterprises in order to control for institutional differences between countries which might affect the usage of foreign trade promotion schemes (Acs et al. 1997). Germany is conducive to the study because it has a strong export sector and a sophisticated foreign trade promotion system. In addition, we defined 16 dummy variables for each federal state of Germany to control for institutional aspects on the regional level. As base group we have chosen North Rhine-Westphalia which is in terms of population, economic output and exports the largest Land of Germany (Haunschild et al. 2007).

Table 5 (see appendix) presents zero order correlations. The bivariate relationships indicate that most of the independent variables are significantly related to participation in foreign trade promotion schemes. In addition, all the independent variables were not highly correlated with each other indicating no major risk for multicollinearity with regard to our estimation results.

To test our hypotheses we estimate four econometric models using hierarchical regression analysis:
\[ p(\text{scheme}) = \beta_0 + \beta_1 \text{firm}_\text{size} + u \]  
(1)

\[ p(\text{scheme}) = \beta_0 + \beta_1 \text{firm}_\text{size} + \delta \text{control} + u \]  
(2)

\[ p(\text{scheme}) = \beta_0 + \beta_1 \text{firm}_\text{size} + \beta_2 \text{foreign}_\text{dep} + \delta \text{control} + u \]  
(3)

\[ p(\text{scheme}) = \beta_0 + \beta_1 \text{small}_\text{dep} + \beta_2 l \text{arg e}_\text{nodep} + \beta_3 l \text{arg e}_\text{dep} + \delta \text{control} + u \]  
(4)

In model 1, the coefficient of "Firm_Size" reflects the discrete change in probability in scheme participation between small businesses and larger enterprises. Model 2 gives the same effect, while holding past development of employment, geographic concentration, degree of internationalisation, doing business abroad, industries and federal states fixed. In the third model we additionally control for in-house resources by adding "foreign_dep" to the equation. Finally, we relax the assumption that the “department premium” is assumed to be the same within small firms and larger ones in model 4 (see Wooldridge 2003). Put differently, here we estimate a model that allows for differences among four groups: Enterprises with (1) less than 50 employees (small firms) with a person or department specialised in foreign trade affairs and (2) companies with 50 employees and more (larger firms) also with such specific in-house resources as well as (3) small businesses which have no such person or department and (4) larger firms also without such specialised capacities and capabilities. The corresponding dummy variables are Small_Dep, Large_Dep, Small_NoDep and Large_NoDep, respectively. As our base group we choose Small_NoDep in model 4. Thus, the estimates on Small_Dep, Large_Dep, and Large_NoDep measure the proportionate difference in the probability of promotion usage relative to small enterprises with no foreign trade department.
### Table 3

**Probit Estimation Results**  
(Dependent Variable: Usage of Foreign Trade Promotion Scheme)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1 dF/dx (Robust SD)</th>
<th>Model 2 dF/dx (Robust SD)</th>
<th>Model 3 dF/dx (Robust SD)</th>
<th>Model 4 dF/dx (Robust SD)</th>
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<tbody>
<tr>
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<tr>
<td>Firm_Size</td>
<td><strong>-0.1893</strong>* (0.0409)</td>
<td><strong>-0.1621</strong>* (0.0495)</td>
<td><strong>-0.0752</strong> (0.0537)</td>
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<tr>
<td>Foreign_Dep</td>
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<td></td>
<td><strong>0.2752</strong>* (0.0459)</td>
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<tr>
<td>Small_NoDep</td>
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<td>(Base Group)</td>
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<td>Small_Dep</td>
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<td><strong>0.3359</strong>* (0.0559)</td>
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<tr>
<td>Large_NoDep</td>
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<td></td>
<td><strong>0.1371</strong>* (0.0661)</td>
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<tr>
<td>Large_Dep</td>
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<td></td>
<td><strong>0.3259</strong>* (0.0546)</td>
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<tr>
<td>Empl_Suc</td>
<td><strong>0.0385</strong> (0.0449)</td>
<td><strong>0.0497</strong> (0.0455)</td>
<td><strong>0.0460</strong> (0.0458)</td>
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<tr>
<td>Geo_Con</td>
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<td><strong>0.1432</strong>* (0.0520)</td>
<td><strong>0.1387</strong>* (0.0523)</td>
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<tr>
<td>Branch_Int</td>
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<td><strong>0.1363</strong>* (0.0520)</td>
<td><strong>0.1357</strong>* (0.0516)</td>
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<tr>
<td>Rel_Abroad</td>
<td><strong>0.3099</strong>* (0.0585)</td>
<td><strong>0.2786</strong>* (0.0621)</td>
<td><strong>0.2816</strong>* (0.0622)</td>
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<td>Ind_Manu</td>
<td><strong>-0.1606</strong> (0.0779)</td>
<td><strong>-0.1443</strong> (0.0794)</td>
<td><strong>-0.1496</strong> (0.0789)</td>
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<tr>
<td>Ind_Trade</td>
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<td><strong>-0.1122</strong> (0.0979)</td>
<td><strong>-0.1108</strong> (0.0982)</td>
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<tr>
<td>Ind_Serv</td>
<td><strong>-0.1565</strong> (0.0794)</td>
<td><strong>-0.1632</strong> (0.0801)</td>
<td><strong>-0.1700</strong> (0.0799)</td>
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<td>Ind_Craft</td>
<td><strong>-0.2412</strong> (0.0949)</td>
<td><strong>-0.1859</strong> (0.1051)</td>
<td><strong>-0.1858</strong> (0.1054)</td>
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<tr>
<td>Fed_States</td>
<td>16 categories (p=0.036)</td>
<td>16 categories (p=0.028)</td>
<td>16 categories (p=0.027)</td>
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N. obs.  
Wald Chi²  
McFadden R²  
Log pseudolikelihood  

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<tr>
<td>Wald Chi²</td>
<td><strong>20.7</strong>*</td>
<td><strong>92.4</strong>*</td>
<td><strong>125.4</strong>*</td>
<td><strong>126.5</strong>*</td>
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<tr>
<td>McFadden R²</td>
<td>0.025</td>
<td>0.118</td>
<td>0.157</td>
<td>0.159</td>
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<tr>
<td>Log pseudolikelihood</td>
<td><strong>-414.6</strong></td>
<td><strong>-375.1</strong></td>
<td><strong>-358.5</strong></td>
<td><strong>-357.3</strong></td>
</tr>
</tbody>
</table>

White robust variance estimators. *, **, *** denote statistical significance at an error level of 10, 5, and 1 %.
3.3 Univariate probit estimates

Table 3 displays the results of our probit estimations. As can be seen, our hypotheses are borne out by the data. Estimation results of model 1, for example, provide evidence that small firm size is negatively linked to the probability of using promotion. The coefficient is significant and negative which implies that, on average, the probability of applying for a promotion programme is lower for small firms ($\beta_{dF/dx} = -.1893; p < .01$). In the second model we keep the size variable and include a set of control variables. As we assumed, the negative correlation between firm size and application probability does not disappear if we include these controls ($\beta_{dF/dx} = -.1621; p < .01$). Yet, the effect of the size variable becomes smaller if we include these controls. The discrete effects imply that small firms have an 18.9 percentage points lower probability of support scheme usage if we do not include the control variables in our analysis. On the other hand, if we include the controls, the magnitude of the size-effect is decreased to 16.2 percentage points. This means that only a part of the size-effect is explained by the controls in our second model. Therefore, H1 is supported by the data.

So obviously, there must be some other intervening mechanism that explains why small firms use the public support measure to a lesser extent compared to larger enterprises. To analyse such mechanism, we first include the department variable to control for the effect of restricted management capabilities and limited resources in model 3. As mentioned above, if our assumptions about the impact of the restricted internal resources of small companies are correct, we should observe that the effect of the size variable disappears if we control for such in-house capabilities. And, as can be seen, the size effect disappears as expected. That is, as soon as small businesses have built up enough in-house capabilities they do not have a significantly lower probability of using foreign trade support measures. Thus, we can conclude, that a large part of the support scheme application probability is actually explained by the availability of in-house resources. Hence, H2 seems to be supported by the data.
Yet, as stated above, a limitation of model 3 is that the estimated “department premium” is assumed to be the same for small enterprises and larger firms. This is not the case in model 4 were we control for differences among the following three groups: Small_Dep, Large_Dep, Small_NoDep and Large_NoDep. The base group is Small_NoDep (i.e. small firms with less than 50 employees with no foreign department). The estimates on the three dummy variables Small_Dep, Large_Dep, and Large_NoDep measure the proportionate difference in foreign trade promotion usage relative to Small_NoDep.

The results of model 4 confirm that H2 is supported by our data: Holding all other factors fixed, we find that small firms which have no foreign sales department are estimated to have a lower probability of using such foreign trade promotion programmes than (a) larger firms with a department (β_{df/dx} = .3259; p < .01), (b) small firms with a department (β_{df/dx} = .3359; p < .01) and (c) larger firms with no department (β_{df/dx} = .1371; p < .05). Moreover, further analysis also shows that small firms with a department do not achieve a statistically different level of promotion usage probability than larger firms with a department (χ² (1) = 0.04). On the other hand, larger firms without a department do diverge significantly from small firms with a department (χ² (1) = 6.90) and larger firms with a department (χ² (1) = 8.12).

3.4 Bivariate probit estimates

Our analysis is based on the idea that small firms use promotion schemes to a lesser extent because of the limited availability of in-house resources. Yet, it is also arguable that such an approach might not be appropriate because the decision to establish a foreign trade department and the decision to apply for foreign trade promotion might not be independent. In other words, it can be argued that the probability of applying for a promotion scheme is a conditional probability which in turn depends on the firm’s prior decision to implement the skills of a person or department specialised in foreign trade affairs. That means, the correlation of errors between both equations may be likely because the existence of promotion schemes may
have prompted specific firms to build up new in-house capacities and capabilities. In such cases, estimating the scheme usage probability as a univariate probit may provide incorrect estimates (Baum 2006; Cameron and Trivedi 2009). Fortunately, estimating a seemingly unrelated bivariate probit model can mitigate the problem described above. The bivariate probit model is based on the principle that both decisions are not separate but perhaps interrelated. Hence, in order to strengthen our findings and to test hypothesis H3 we use a bivariate probit model.

Table 5 shows the results of the bivariate probit estimations. In the first-stage equation, we use the controls described above. It can be argued that sector-specific differences, the orientation of a firm towards internationalisation or growth might also affect its decision to establish a source consisting of a department specialised in foreign trade affairs. The second equation, which is observed conditional on the outcome of the first, describes the probability of foreign trade promotion usage. Here, we include the same set of control variables as in Table 4, which we argued are important to this decision. In our estimated model, the potential correlation \( p \) is negative but not significant (ROH), meaning that estimates of the second equation are not biased if we do not account for the potential selection described above. Even though, in both models (univariate and bivariate) the effects of our major explanatory variables are similar, meaning that small firms which have no foreign department are estimated to have a lower probability of using such foreign trade promotion programmes than their counterparts that do have such resources at their disposal.

Furthermore the results of the first-stage equation show that small firm size has also a negative effect on the probability of having a person or department specialised in foreign trade affairs. Holding all other factors fixed, small firms are estimated to have a lower probability of having such internal staff capacities and capabilities at their disposal by around 32 percentage points (\( \beta_{df/dx} = .3197; p < .01 \)). Thus, H3 is also confirmed by the data.
In other words, it can be concluded in view of the fact that larger enterprises significantly more frequently have at their disposal specific in-house resources they are also at an advantage in the use of the foreign trade promotion system compared to small businesses.
### Table 4
Seemingly Unrelated Bivariate Probit Results
(Dependent Variable: Usage of Foreign Trade Promotion Scheme)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 5 Equation 1 (Robust SD)</th>
<th>Model 6 Equation 2 (Robust SD)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Base Group)</td>
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<tr>
<td>Small_NoDep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small_Dep</td>
<td>1.3949* (0.7716)</td>
<td></td>
</tr>
<tr>
<td>Large_NoDep</td>
<td>0.3099* (0.1780)</td>
<td></td>
</tr>
<tr>
<td>Large_Dep</td>
<td>1.2950* (0.6760)</td>
<td></td>
</tr>
<tr>
<td>Firm_Size</td>
<td>-0.8347*** (0.1889)</td>
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</tr>
<tr>
<td>Empl_Suc</td>
<td>-0.0655 (0.1159)</td>
<td>0.1253 (0.1140)</td>
</tr>
<tr>
<td>Geo_Con</td>
<td>0.1975 (0.1327)</td>
<td>0.3051** (0.1140)</td>
</tr>
<tr>
<td>Branch_Int</td>
<td>0.3458*** (0.1291)</td>
<td>0.2628 (0.1882)</td>
</tr>
<tr>
<td>Rel_Abroad</td>
<td>0.8487*** (0.2385)</td>
<td>0.6329** (0.3159)</td>
</tr>
<tr>
<td>Ind_Manu</td>
<td>-0.1821 (0.1998)</td>
<td>-0.3475* (0.2109)</td>
</tr>
<tr>
<td>Ind_Trade</td>
<td>-0.7036*** (0.2615)</td>
<td>-0.1636 (0.3238)</td>
</tr>
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<td>Ind_Serv</td>
<td>-0.2454 (0.2063)</td>
<td>-0.3978* (0.2211)</td>
</tr>
<tr>
<td>Ind_Craft</td>
<td>-1.0891*** (0.3756)</td>
<td>-0.3323 (0.3921)</td>
</tr>
<tr>
<td>Fed_States</td>
<td>16 categories (p=0.468)</td>
<td>16 categories (p=0.027)</td>
</tr>
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N. obs. 615  
Wald Chi² 1212.4***  
Log pseudolikelihood -710.6  
RHO -0.3155

White robust variance estimators. *, **, *** denote statistical significance at an error level of 10, 5, and 1 %.
4. Conclusions, Recommendations and some Limitations

The results of our empirical analysis provide strong evidence that small businesses use foreign trade promotion programmes to a lesser extent compared to larger firms. Based on the theoretical framework of the resource-based view we examine what causes the lower participation rate of small enterprises. For this purpose, our paper focuses on staff capacity and capability as explaining factors for the ability of small businesses to use official foreign trade promotion programmes. Our findings confirm the predictions of the resource-based view. They clearly illustrate that – although it is the explicit aim and the economic justification of the foreign trade promotion to reduce the size-specific lack of in-house resources of small firms – it is exactly due to these structural problems, which it tries to counter-balance, that the support measures are only, with difficulty accessible for small businesses. That indicates that the promotion scheme implicitly requires the existence of internal capabilities and resources which small firms typically do not possess. As a consequence, governments have to focus their promotion activities better than currently on small enterprises.

A recent study has shown that small businesses seem to profit from the foreign trade promotion while larger enterprises may incorporate windfall gains when benefiting from such programmes (Hauser and Werner 2009). The combination of these findings is alarming because it shows that although small firms seem to benefit from the promotion programmes, the current promotion system puts them systematically at a disadvantage. This, of course, could lead to a waste of public funds. Thus, policymakers at all levels of government have to pay particular attention to the implementation of policies and strategies which facilitate the access of small businesses to public promotion programmes.

Thus, policy measures should aim at reducing the existing shortcomings of the promotion scheme. To attend to enterprises which only possess limited in-house resources in an improved way, the promotion system should be simplified. In order to achieve this, policy mak-
ers have to take the structural problems and specific limitations of small firms more specifically into account. These efforts could initially target e.g. at the improvement of co-operation and co-ordination of the various institutions engaged in the foreign trade promotion. In this context, it is necessary that each institution views and presents itself as part of a comprehensive promotion scheme. For this purpose, the creation of a coherent corporate design could develop an integrating effect and play a significant role in the way the promotion scheme presents itself to both internal and external stakeholders. Hence, it is advisable to develop a common logotype and logogram as well as a uniform nomenclature for all promotion instruments and measures. This would take into account that small businesses require a high transparency and easy accessibility to the promotion system.

It should be noted however, that our study also has some limitations, which should be taken into consideration when examining our results. On the one hand, we rely on self-reported and single-item measures. Yet, we see this issue as less problematic for our study because the nature of our constructs are concrete practices (manifest variables) which are likely to be perceived similarly by all respondents and not perceived judgements or psychometric properties where multi-item measures are recommended (Fuchs and Diamantopoulos 2009). Second, we control only for in-house capabilities and management resources and not for all kinds of possible resource shortages (e.g. lack of financial resources etc.) because we do not have the information on this. Thus, similar studies in the future using a more comprehensive data source would be valuable. Yet, even when keeping these limitations in mind, in summary we are confident that our results indicate that small businesses participate in foreign trade promotion schemes to a lesser extent and that the lack of internal resources explains why they do so.
5. References


Wright, P. C. (1993): The personal and the personnel adjustments and costs to small businesses entering the international market place; in: Journal of Small Business Management; Vol. 31, Iss. 1; pp. 83-93.
Table 5

Pair-Wise Correlations Among Variables

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Note: Significance level p<.05 in italics
Developing the Entrepreneurial Spirit

Learning in Action!
A Cross-disciplinary Problem-Based Learning Environment for Entrepreneurship

ICSB 2010
The Santa Fe Case: Using Art to Redevelop Ghost Towns

(A Work in Progress)

R. Wilburn Clouse, PhD
Western Kentucky University
Charles R. Stowe, PhD
Lander University
The Santa Fe Case: Using Art to Redevelop Ghost Towns

Cross Disciplinary Learning in Action Cases Summary Reports

The Learning in Action process has or/ is currently running in 10 different Universities. This is a brief summary of products from the Santa Fe case. This case along with the Phoenix case and the Music City Blues case have been used to develop redevelopment entrepreneurship plans for the following cities: Athens, TN; Florence, SC; Maryville, TN; Bowling Green, KY and Franklin, KY. This is a draft of ideas for discussion.

Executive Summary

All across America, small towns are facing a similar plight – the gradual decline of their downtown area. Early on, small town planners were concerned with traffic problems brought about by industrial growth. Many towns elected to build industrial parks to accommodate new businesses, and then to create newer highways to meet the transportation requirements of those companies. As areas outside of town began to be developed and supplied with city services, retail businesses began to relocate to new buildings as well. Today, businesses are moving out of central areas as more and more people elect to go “where the shoppers are,” generally to the larger highways that bypass the congestion of small town streets. In addition, large stores, the so-called “big box” retail operations, tend to locate in these outlying areas to take advantage of the increased flow of customers. The Interstate highway system has added to the problem by providing a constant flow of traffic just outside the periphery of most small towns. This traffic encourages the growth of specialty retail stores, as well as hospitality and industrial development.

Where do these trends leave the small town? Once the cycle has begun, it seems difficult to arrest. Usually, older buildings are left to crumble and decay, with the only holdouts often being the city offices, some professional buildings, and the law enforcement offices. Development dollars are spent elsewhere, while the downtown area sits as a sentimental reminder of the past, at best. Plans developed by different students will be discussed and the role of the arts students will be clearly shown. These are some of the cases developed by Wil Clouse and team while he was the director of the Entrepreneurship Forum for Education at Vanderbilt University and used in several different university sites across the country. These cases are now available at the Center for Entrepreneurship and Innovation at Western Kentucky University- www.wku.edu/cei.

So What Issues

Several cases will be discussed that show how students from several different disciplines work together to develop business ventures to revitalized small town areas that have become ghost town. It will show how business, arts and science and human and organizational development students work together to learn multiple concepts
simultaneously and shows the importance of applying knowledge across disciplines. It makes learning real and alive for several different types of students.

**Presenters**

This case will be presented by two faculty members from two different Universities. One member of the development team personally invested his own money in a ghost town to show students and the local business people that ghost towns can live again. This presentation will tell the story of how students in the Arts working with other students helped redevelop small down areas in several different cities. Personal experiences by the presenters will also be included.

**Brief summaries**

**Vanderbilt University**

Professor: Dr. R. Wilburn Clouse (Now At WKU)
What part did the case play in the course? 20%
HOD 2760
Number of Students 90
Undergraduate

Reason for using the cases

1. Introduction to entrepreneurship +
2. Critical thinking about entrepreneurship +
3. To help develop the "e" spirit +
4. Building organizations for the future +
5. Addressing social issues +
6. Others

Case outputs: Class presentations, role play & research papers

**Case Name:** Santa Fe  
**School:** Vanderbilt University  
**Title:** Dore to Door Consulting

**Case summary:**

The students of Dore to Door Consulting, proposed to revitalize and redevelop downtown Athens by implementing a plan that focused on bringing in a major retailers and chain restaurants in addition to revitalizing existing landmarks. The plain includes placing a Wal-Mart Supercenter in the heart of downtown and targeting restaurants and shops that appeal to various demographic segments of the population, i.e. families, college students, etc. The consultants took into account the age, socio-economic background, and educational level of the community and targeted businesses that would appeal to the greatest percentage of the population. The focus of their proposal is to bring
individuals back to downtown Athens. They plan to accomplish this by creating a shopping strip, restaurant and bar district, renovating the historic Robert E. Lee hotel, establishing a Civil War Heritage museum, creating parks, and bringing in a movie theatre. The major element of their proposal is to use a Wal-Mart Supercenter as a draw to bring people into the downtown area. They hope that by having a popular low cost retailer in the midst of downtown it will expose people to the other attractions in the area. Dore to Door consulting created a marketing plan that focuses on hosting a series of community events to promote the revitalized downtown. The events range from an initial grand opening celebration to weekly parties held in the town square. The group also proposes creating a slogan and logo for the new downtown. The students operational plan begins with recruiting major retailers to establish a presence in the area, their next step is to begin renovating existing structures, and finally to create a park in the town square. The Consultants are seeking a loan of $50,000 to be repaid over 5 years; they predict their risk to be moderate.

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Case Name: Phoenix
Title: Phoenix Cyber Cafe
School: Vanderbilt University

Case summary:
The entrepreneurs of the Phoenix Cyber Cafe aim to fill a niche in the city of Athens by providing not only a coffee shop with vast technological resources but an environment that fosters educational and social interaction. The cafe will be housed in a former print shop near Tennessee Wesleyan College and will feature specialty coffees and drinks, wireless and hard line internet access, a variety of technological resources, and baked goods. The cafe will provide the opportunity for social and educational interaction through open mike nights, guest speakers, and designated study space. The developers of the Phoenix Cyber Cafe sight the organizations uniqueness in the community as a major contributor to the success of their organization. The cafe’s target market is members of the Athens community and those affiliated with Tennessee Wesleyan College which average approximately 14,000 people. The cafe will operate at a
price point that reflects the demographics of the community it serves, which has an average income of about $20,762. The organization’s marketing plan is based on the size of the community they serve and focuses initially on direct mail and community flyers. The creators of the Phoenix Cyber Café predict moderate risk and request $150,000 and predict a net profit of $137,807 in the first year.

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Case Name: Phoenix Case (2nd project)
Title: Ground Up, Inc.
School: Vanderbilt University

Case summary:
The Nashville based coffee shop *Ground Up* seeks to combine entrepreneurship and artistic development in the heart of Music City. The group of entrepreneurs responsible for the project, propose to address the challenges facing music industry songwriters by providing them with flexible jobs in a creative and artistic environment. The coffee shop will feature an artist showcase, live recordings of performances, a variety of coffee and refreshments, and artist workshops. The organization’s mission is to encourage “a holistic, creative, and interactive environment where the employees experience professional interaction, educational balance, and artistic development (EIA case).” Ground Up’s products include coffee, tea, frozen drinks, and baked goods. The group plans to market through securing a location with high visibility and word of mouth close to their target audience of students, songwriters, and others in the music industry. The entrepreneurs are seeking $100,000 for start up with total personal investments of $150,000. They expect to see an income of $187,200 on the low end to $343,200 on the high end.

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Case summary:
The idea is to create a coffee shop/internet café in Athens, TN in order to capitalize on its location near Tennessee Wesleyan University. There is no immediate competition in the area which leaves an open niche for the café. Strategic planning has gone into the basic café design, the atmosphere, entertainment, and food provided. This café would be the first step in revitalizing this small downtown area.

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Francis Marion University
Professor: Dr. Joe Aniello
School of Business
MGT 758 – New Venture Creation
Total number of students: 15
Business course MGT454 – Entrepreneurship and Small Business Management.
23 Business Students

MBA requirement

Reason for using the cases

1. Introduction to entrepreneurship +
2. Critical thinking about entrepreneurship +
SRW Inc. Consultants (Santa Fe Effect Case)

This group proposed a comprehensive revitalization and development plan for downtown Florence. Their plan was very attractively written and proposed a series of actions that would revitalize the downtown area through the development of entertainment. The revitalization plan was designed to attract a multitude of residents and commuters to the downtown area. The group proposed several projects to make it more attractive to the general public and to make the area more than a place of convenience. They proposed a portfolio of an Italian dining and shopping activities. Some examples include an opera house, arcade, park, comedy theatre house, a French bakery, wine and cheese shop, pastry and coffee shop for stimulating thinking and boutiques for shoes, clothing and accessories and a bistro for multicultural cuisine. The group realized this would need major sources of startup funds from several different areas. In addition to state and local funding to stimulate creativity and innovation, the group also would seek venture capital to help build and revitalize the downtown area. This group had excellent pictures of the downtown area as related to how the revitalization would take place. The group emphasized imagination and ambition to bring people downtown.

ACR (Santa Fe Case)

This project emphasizes the revitalization of downtown Florence by embracing its traditions and historical value. The assumption behind this report was that people want a simple and safe way of life in a friendly and productive neighborhood. The group first of all indicated it would be necessary to clean up the downtown area before businesses would be willing and eager to open and or relocate to the area. The group felt that this was a necessary prerequisite to attracting businesses to the downtown area. They indicated if this could be done, venture capitalists maybe willing to invest in new apartment and condo living in the downtown area. The group wanted to create a more sophisticated cultural area that would incorporate the historical value of Florence. The group further indicated that there would be some attempt to clean up, revitalize, renovate and beautify the area before building new buildings. Vacant property would be sold to infuse new ideas and new businesses in the area. This group also indicated that it would take a substantial sum of money to revitalize the downtown area. They estimated it would take between 50 and 70 million dollars to begin the renovation.

Main Street—New Downtown Florence (Santa Fe Case)

Main Event is a restaurant/bar proposed to be located in downtown Florence. The group developing this business plan indicated that this new venture would provide quality food and services in a relaxing vibe, dance club venue. The group indicated that the Main
Street restaurant would be the initial investment in the developing the downtown area. The group proposes a high-energy concert theme venue for the restaurant. Of special interest, the restaurant will offer an assortment of fine beverages including beers and wines from around the world. The group intends to draw primarily from the Florence market but will also try to encourage guests from surrounding towns and cities. The plan also shows the forecast for the next year and provides startup costs.

**Aquarium Pee Dee (Santa Fe Case)**

This group also recognizes the need to revitalize the downtown area. They decided there was a need to change the area by renovating buildings and developing attractive landscaping. This group proposed a downtown Aquarium. Through this project the group aspired to create an area that encompasses a community of enlightened minds and high morale. The Aquarium will offer recreational activities for students to enjoy as well as an educational approach that would increase the community’s awareness of Florence life. The group estimated it would take approximately $5 million to start this venture. This would be South Carolina’s only inland aquarium. This project is well thought out and provides many details for implementation.

**GCP Downtown (Santa Fe Case)**

This group proposes to improve the downtown area of Florence by building and developing the biggest bar in Florence, South Carolina for people of all ages. The restaurant will feature steak, chicken, hamburgers, seafood and many side orders. They propose to sell the finest of beers and wines. They also proposed to have a video arcade within the restaurants. This group also wants to have a place where kids can come and get off the streets. They want this to be attractive place for both adults and young adults to attend. They have already identified a location in downtown Florence. They have developed a very, comprehensive startup costs and have identified liabilities statement.

**Florence downtown revitalization plan (Santa Fe Case)**

This group proposes a place of entertainment for mature audiences. This plan proposed to attract college students, commuters who are going to the beach and working class people. The plan is to design the city for several groups of people. The group would like to make downtown Florence a cultural hotspot. The group has identified several other locations around Florence that would be sources of competition. The group proposes expanded and redesign sidewalks, convenient parking and improved public transportation as a starting point to rejuvenate the downtown area. The group also identifies several sources of revenue for their plan. The plan calls for support funding from National Trust grants and loans for historical preservation trust grants and loans for historical preservation, and HUD grants. This proposal is more of a social entrepreneurship venture than a capitalist idea.
Lottery --Downtown Florence (Santa Fe Case)

This group has taken a unique approach to revitalizing downtown Florence. The group proposes the development of the lottery. The group states that the lottery has been proven to be a way to revitalize downtown areas. The goal for the project is to change Florence from a rundown city to a vibrant historical city. In order to get more businesses to come downtown, the group proposed to get the customers more interactive with business in Florence. The group believes that the lottery would provide the income to revitalize the downtown area. They would like to make the downtown area a place where natives and tourists could come together for an exciting experience in a joyous atmosphere and new social environment. They estimate it would take $4 Million to generate the lottery. However, they believe the lottery would generate $500,000,000 over the next ten years. The study also has developed a marketing strategy that would support their arguments. Breakeven analysis and support documents are presented to support their plans.

Providence-Consulting Agency Incorporated (Case Report 1) Athens, TN

This group has proposed a consulting firm to study and redevelop small downtown areas. The agency will be located in Knoxville, Tennessee with other offices in Athens Tennessee. The culture of this organization is built around an equity, fairness, stability, and commitment to honesty. This company will provide consulting services to small downtown areas for redevelopment. The first assignment for this company will be the renovation and development of the Robert E. Lee Hotel located at north Jackson Street in downtown Athens, Tennessee. The plan has identified a number of organizations that may have an interest in the revitalization of this downtown facility. The old rundown Robert E. Lee Hotel is a historical landmark in Athens, Tennessee. This is a very good approach to the Santa Fe affect case.

ABC Consulting Firm (Downtown Maryville, Tennessee revitalization proposal) (Santa Fe Effect Case)

This group’s proposal developed a consulting firm to investigate and propose strategies for revitalizing small downtown areas isolated by major interstates. The group chose the town of Maryville, Tennessee, which is located in the foothills of the Smokey Mountains. The project does a good job of identifying the characteristics of downtown Maryville and identifying the strengths of the city. The plan identifies a process to increase a sense of community, to generate local revenue and increased employment, the development of an in-depth action plan for project development and a method to infuse art and culture focuses into the downtown area. The plan would be a 501(c)3 non-profit organization. The plan identifies a number of strategies to revitalize the downtown area, develops a comprehensive cost analysis to do so and provides a milestone schedule for downtown revitalization. The plan provides limited resources to carry out the proposed activities.
Ground-Up (Music City Blues Case)

This group chose to call their business venture “Ground-Up,” and their title page shows coffee beans. This proposal was written in response to our Music City Blues case. The group proposed a coffee shop atmosphere that would provide part-time jobs that would give songwriters the opportunity and stability of an income and also provide them a creative environment to create and distribute their music. The Ground-Up Coffee Shop would provide songwriters the opportunity to have musicians come in and play their music onstage and to experience a live performance atmosphere. The Ground-Up Atmosphere encourages a holistic, creative and interactive environment where the employees experience professional interaction, educational balance and artistic development. The café provides the songwriters the flexibility to make money and practice and strengthen their talents. This was a well thought out, well developed approach to the Music City Blues case. The proposal provides support documentation for their approach, as well as estimated financial budgets.

The Phoenix Cyber-Café (The Phoenix Case)

This proposal was written in response to the Phoenix Case, which was originally written for Tennessee Wesleyan College in Athens, Tennessee. This group did an excellent job identifying the strengths and weaknesses of Athens, Tennessee, and developed a strong target market for the Phoenix Café. The project developed a reasonable assumption for a revenue stream and start-up expenses. The Phoenix Cyber-Cafe venture is directly targeted to a need in the community for advanced Internet access and for a creative social learning environment. The café is targeted for Tennessee Wesleyan College students (but also would be open to the community at large). This could be the forerunner of the development of the historical downtown Athens area that would be totally “wireless.” In addition to being a coffee shop to encourage creativity and entrepreneurship, the Phoenix Café would also feature live entertainment and performance for local artists as well as an avenue for Tennessee Wesleyan students. This project is very feasible for downtown Athens, the city in which we held our first Entrepreneurs in Action! Summer Institute in the summer of 2004.

Phoenix case (TWC)

The primary focus of the Honors class was to respond to the Phoenix case. The students were instructed to develop an Internet Cyber Café that would draw students from Tennessee Wesleyan College and the community at large. The primary focus of the Cyber Café was to develop a creative environment where new ideas could germinate and new business ventures could develop. Some previous thought had been given to the Cyber Café by professors and students at Tennessee Wesleyan and a former print shop had been secured as a facility for the Cyber Café. The students conducting the project decided to call the Cyber Café the “Warehouse.” This was a fitting name, since the building resembled a warehouse environment. The “Warehouse” was designated a limited liability company and the six-member team decided to invest $3,000 each as operating capital.

Before starting the “Warehouse”, the students did a comprehensive research analysis on current competition. They identified ER Video as an attempt to start a Cyber
The group also tested out some coffees at Starbucks and investigated other similar business ventures in and around the Chattanooga and Cleveland, Tennessee areas.

The “Warehouse” was designed to be a place for live entertainment, Internet and TV access, board and card games, video games, and well as food and coffee. The “Warehouse” programming was designed to encourage people to enter the doorway of new knowledge and to use the current facility to stimulate interesting and live conversation. The group also recognized that there would be certain risk factors related to this business venture. The group also developed a comprehensive pro forma that took into consideration cost analysis, break even, and revenue stream. Overall, this group seemed to learn and practice the skills necessary for an entrepreneur.

**Prelude Music Promotions (Music City Blues Case)**

The group that selected Music City Blues developed an LLC called “Prelude Music Promotions.” They developed a very attractive logo and slogan called “Big Dreams, Big Possibilities with Prelude Music Productions: Promoting Songwriters Across the Nation.” This group had a very interesting introduction to their business, playing off the early life of Gretchen Wilson, who had the award winning song “Redneck Woman.” Their scenario describes a mentor relationship between Gretchen Wilson and John Rich. It was out of this mentor idea that the Prelude Music Promotions group developed their business venture. They decided to provide the same kind of mentoring services to young developing stars as would be provided by a role model or mentor. The group recognizes that there are many creative, talented people in the world, but many never find their way to stardom. The group developed a very synergistic marketing approach using the 80/20 Rule.-- That 80% of the revenue is generated by 20 % of songwriters and record companies. The group plans to have its home office in Nashville, but to have sessions, in New York, Atlanta, Miami, Chicago, Dallas and Los Angeles. The plan presents a realistic growth potential and identifies talented management group. The plan also has an excellent pro forma and balance sheet. The plan is very attractive, including pictures and calling card designs. It is obvious that this group has spent a lot of time thinking about this business venture. They also have agreed to self-fund the project with investments from each of the four entrepreneurs of $250,000 each and with another $650,000 from two investors. (I think this is a hypothetical budget.)

**Livewire (Santa Fe Effect Case)**

Livewire, LLC, is a business venture derived from the Santa Fe Effect case. This group proposed a restaurant-entertainment business venture that would be placed downtown in Athens, Tennessee in an old CBS building. The group discusses the movement of businesses closer to the Interstate and the dying of the downtown area. So, they have proposed a restaurant club type of entertainment business. A comprehensive discussion centers on the operational characteristics of the restaurant, including employees and salary arrangements. The four owners plan to invest $28,000 from their own funds and borrow $300,000 from a local bank and secure another $200,000 from prominent business people in the community.
The group conducted a competitive analysis, including similar restaurant/club enterprises located in larger cities such as Knoxville and Chattanooga. Furthermore, they recognize the risk involved in this type of business venture. The group uses the 4 P of marketing in order to establish a marketing strategy. The plan provides a menu, a balance sheet and a pro forma.

**Western Kentucky University**  
Professor: Dr. Wilma R. King

Course title and Number: J453 Public Relations Research  
Number of students: 29  
Undergraduate  
What part did the case play in the course? 25%  
Case outputs: Class presentations & research papers

Reason for using the cases

1. Introduction to entrepreneurship +  
2. Critical thinking about entrepreneurship +  
3. To help develop the "e" spirit +  
4. Building organizations for the future +  
5. Addressing social issues+  
6. Others —International

**Case Name: The Phoenix**  
Western Kentucky University

**Case Summary:**  
Bowling Green, Kentucky is the ideal test market for Latte Login, the city’s first Internet café, because it is a city with a need, and none of the services in the marketplace today meet that need and offers an atmosphere, conducive to gathering over a bite to eat and stimulating conversation. Kentucky lags behind other states in technology, making Latte Login a beneficial partner in this community and a business suited for expansion into university communities such as Lexington, Owensboro and Murray. Similar services can be found in cities with populations far exceeding Bowling Green’s population of 50,000.

Our building’s design, unique in itself as it breaks the typical box-like mold, is a main attraction to the business. The light brown brick exterior, shaped as a “to-go cup of coffee including the lid,” shoots machine-produced steam sent through ducts, and then released out the top of the building, creating a retro look. This will be a visual display people will not overlook. Especially on cold mornings, this will make Latte Login a landmark.

What medium did the students use to present the project: PowerPoint presentations
Number of students involved in the case: 5

Case Name: Music City Blues

Case Summary:
With the motto, “Raw Talent, Real Results,” Raw Talent Consulting strives to give hopeful musical artists all of the tools, information, and know-how that they will need to break into the music industry and most importantly be successful in the industry. The partners feel that there is a general lack of information offered to prospective artists about the music industry as a whole. Many artists don’t know what steps they need to take to make their presence known, and also don’t understand the business and legal aspects of it.

What we do . . .
- The firm offers services such as legal consulting, media communications training, making contacts for artist within the music industry, showcase/booking opportunities, promotional and album cover photography, and publicity to local and national media.
- Raw Talent Consulting teaches prospective artists professional skills such as how to conduct themselves in a professional manner when giving interviews or anytime they are in the public eye as well as in important meetings. They act as a “middle man” by supplying artists with possible contacts that could possibly help them in the future if a good relationship is built.
- Raw Talent Consulting organizes lessons and workshops on songwriting, guitar lessons, drum lessons, dancing, and singing. The firm hosts an annual Showcase in Nashville, TN where all of their clients have the chance to perform their music and talk to executives and talent scouts from the top record labels in the area as well as other smaller labels.
- Provide all the information and resources that an artist needs in order to establish themselves as an artist and a professional while also maintaining a positive image.

What medium did the students use to present the project: PowerPoint presentations

Number of students involved in the case: 6

Case Name: The Santa Fe Effect

Case Summary:
Our mission is to bridge the community through artwork and freedom of expression. We aim to provide an outlet for local artists to display and sell their work. We want to educate people on the history of our community through pictures, music, video, displays, and any other means accessible. Also, our mission is to do all this while entertaining either as a rented space or serving others through the soda fountain.

The idea for our soda fountain gallery spawned from the lack of nostalgia that small town Americas possess. The town we chose to locate in, Franklin, Kentucky, is rich in beauty and history, but the downtown has needs. We feel our business can positive
contribute to the down town growth by drawing crowds to the old-time soda fountain for refreshments and showing community history through art, photos, music, videos and memorabilia. We want to be a positive, contributing member of the community by providing a space to showcase local artists, including school children, and have a community museum open to the public. We will contract with a local framer to have our artwork framed for a discounted price in exchange for advertising in our business. A small admission fee of $3 will be charged to enter the museum. Also, we will host field trips and educational tours on appointment.

Another aspect of our business, apart from the museum is the soda fountain. Patrons will be welcomed by a blast from the 1950s when entering our front door. We will employ a soda jerk, who can make all the fountain favorites, like milkshakes and malts to banana splits. We will only offer a limited menu of soda fountain treats, limited only to drinks and ice cream, but not food items to keep down costs. This is an area of opportunity for our business.

The third aspect to our un-named business is the space for rent. We have found through our market research that many citizens of small towns feel their towns lack a nice area that can be rented. We will offer our space rent, by reservations, for events such as holiday parties, wedding receptions, luncheons, etc. We will offer the services of providing our space, tables, chairs and certain decorations to go along with the charm of our business. Also, we can help renters contact and find catering services. We fill this will fill a valuable need in the community.

What medium did the students use to present the project: PowerPoint presentations
Number of students involved in the case: 6

Case Name: Santa Fe Franklin Fountain and Gallery
School: Western Kentucky University

Case summary:
The mission is to bridge the community through artwork and freedom of expression. They aim to provide an outlet for local artists and sell their work. They also want to educate people on the history of our community through pictures, music, video, displays, and any other means accessible. This is all to be done while entertaining either as a rented space or serving others through the soda fountain.

Please rate each Project with the following scale with 5 being the highest

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**The Phoenix -- Latte Login**  
School: Western Kentucky University

**Case summary:**  
Latte Login is an internet café introduced into the Bowling Green area that offers internet connection in a coffee shop type setting. This is a new idea to introduce to the area, but careful research and planning should lead to its successful implementation. It will be marketed to the students of Western Kentucky due to its location near the university.

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**Case Name: Music City Blues Raw Talent Consulting**  
School: Western Kentucky University

**Case summary:**  
There are two major issues facing the music industry today: the legalities within the business and big executives who take advantage of and overwork artists only to drop them after their first album. The mission of this business is to help artists achieve their ultimate goal—a record deal. Every client is guaranteed to receive all the tools needed to polish themselves as an artist and as a professional, but the implementation of those skills is left up to the artist.

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Tennessee Wesleyan College

Case Name: The Warehouse
School: TWC

Case summary:
The goal is to introduce an internet café entitled “The Warehouse” to create an environment that provides both social and business opportunities. There will be live entertainment and competitive game events in addition to food being provided. The location will be downtown Athens, TN in an effort to re-invigorate the area and cater to Tennessee Wesleyan students.

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Case Name: Music City Blues Prelude Music Promotions, LLC
School: TWC

Case summary:
They will seek out new and talented songwriters and provide educational services, which will help prepare them and increase their chances of success in the music industry. They will be dedicated to promoting their musical abilities to all recording labels in the music industry. The location will be Nashville, TN and participants will be chosen through interviews and auditions. This organization is meant to provide a “stepping
stone” into the recording industry for new talents and to both provide guidance and promote creativity.

Please rate each Project with the following scale with 5 being the highest

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Case Name: Santa Fe LiveWire LLC
School: TWC

Case summary:
The mission is to provide citizens of Athens, TN and the surrounding area with a place to eat good food and enjoy a variety of entertainment. This is to be done in an ethical, safe, and friendly environment for both customers and employees. The hope is also to expand the downtown area and promote community unity in reaction to the “Wal-mart effect” which has hurt local businesses. They will create a theme-based club, which will change based on the evening—including comedy, open mic, senior’s night, country western dancing, etc. The intention is to be family oriented and alcohol will not be served.

Please rate each Project with the following scale with 5 being the highest

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Conclusion
The Learning in Action program is a holistic approach to teaching and/or encouraging the entrepreneurial spirit to several different groups including business, human development, education, public relations, marketing, nursing and other disciplines. The Universities and/or Schools involved are located in Tennessee, Texas, South Carolina, New York, Oklahoma, Louisiana, New York and Kentucky. This presentation is only about 3 cases which are used to rejuvenate small down towns that have been by passed by the current economic trends such as the ‘big box’ companies and super high way such as Interstates across the United States.

///Entrepreneurs in Action!

Description

*Entrepreneurs in Action!* is a curriculum designed to teach entrepreneurship, creativity and innovation by using online cases. The curriculum is a vehicle for creating learning environments that foster entrepreneurial activities and develop a mindset for thinking outside of structured settings. The curriculum takes the position that every person has the potential to think creatively and entrepreneurially.

Project Goals

The *Entrepreneurs in Action!* program is designed to accomplish the following:

- Encourage the development of a cross-disciplinary learning environment
- Connect learning with the framework of the learner
- Provide for just-in-time learning
- Utilize whole-part-whole teaching strategies
- Connect learning with local communities
- Use live cases
- Require the use of a variety of resources
- Provide online experts from the local community for content analysis

Featured Cases

- Blackout in America! – Electrical Energy
- A Question of Power – Oil Shortage
- Chasing the Dragon – Illegal Drugs
- Not in My Backyard! – Recycling
- Music City Blues – Music Business
- Talking to the Air – Wireless Technology
- The Santa Fe Effect – City Planning
- The Phoenix – Creating a Cyber Café
Increasing the rate of mid-sized companies in the economy: lessons from the French most dynamic regions

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Entrepreneurial activity has been studied extensively at country level, but poorly at regional level. Answering to the concern of policy makers requesting locally-designed tools for the regional development, this paper explains why some regions are better than others at developing mid-sized companies by analysing a panel of the 22 French metropolitan regions over the period 2000-2005. The main finding is that (i) the French most dynamic regions are neither the largest regions of the country nor the most populated; (ii) these countries differ on various economic characteristics (e.g. R&D/GDP) but have a relative higher level of churn rate.

Keywords: Entrepreneurial dynamism – Regional development – Growth – Entrepreneurial activity
New Organizational Legal Forms for Global Social Ventures

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ABSTRACT

Social entrepreneurship comprises organizations create social value. The broad array of global social ventures includes numerous organization forms utilized to change the world and improve human life and the planet. Existing organization legal forms include: government agencies, non-government organizations (NGO), non-profit organizations, established business firms, start-up and growing entrepreneurial firms, and various hybrid-form or blended-form organizations. Additional specific type social ventures include: village or farmer or fishing cooperatives, religious social benefit organizations, and local startup organizations designed to directly benefit communities. Numerous combinations and hybrid social benefit organizations are created involving different combinations of for-profit, non-profit, joint-venture, and other alliances. Currently there is a world-wide movement to design new legal organization forms through national legislation to benefit social entrepreneurship ventures. These new legal forms move beyond the old tired discussions and choices of entrepreneurs selecting either for-profit or non-profit organization forms to achieve creation of social value. Current examples from numerous national and state governments are presented with recommendations for future research.

Keywords: Social entrepreneurship; New organizational laws and forms; Institutional theory
Social entrepreneurship describes people and organizations dreaming, designing, and creating positive social change. Three informative definitions which together describe the term social entrepreneurship include “large-scale systemic social change” (Drayton, 2002); creating social value (Dees, 1998; 2001); and “pattern-breaking change” (Light, 2008). The one crucial action word that perhaps best specifies social entrepreneurship is change—change that plans, designs, and actively constructs socially beneficial outcomes for individuals and families and their larger society. A broad perspective on societal change ranges from small rural villages or ignored urban neighborhoods to specific target populations (Yunus, 2003; 2007), geographic regions, nation states or our entire global social, political, economic and ecological system (Offenheiser, 2009; Sacks, 2005; Sen, 1999; Stiglitz, 2003).

Observations and reporting from the social entrepreneurship field suggest that one commonality that distinguishes social entrepreneurs from others is that they tend to think broad brush creative thoughts and expect that their plans, new organization designs, and action will positively address and solve huge social problems. Drayton (2007a; 2007b) states that social entrepreneurs use systematic change ideas and create organizations designed and built to move forward beneficial social change.

This paper commences with the empirical reality that social entrepreneurs exist and are currently changing the world for the better (Bornstein, 2004; Dees, Emerson & Economy, 2001; Harding, 2004). Numerous recent studies have documented the thoughts and actions of active social entrepreneurs (Alvord, Brown & Letts, 2004; Kerlin, 2009; Light, 2008; Nicholls, 2007; Peredo & Chrisman, 2006; Pearce, 2005; Wei-Skillern, Austin, Leonard & Stevenson, 2007) and environmental entrepreneurs (Dean & McMullen, 2005).
Entrepreneurial individuals demonstrate their creativity, innovation, passion and tenacity in their thoughts and actions at both the individual and organization levels of analysis. The entire management design and process of creating and building new organizations or growing existing organizations is similar (if not identical) for individual business or corporate entrepreneurship or social enterprise ventures and organizations. Social entrepreneurs are different in that their motivations involving desires to improve the world and live out a mission-driven life and the various methods for accurately measuring social value outcomes (Brooks, 2009).

Most global social enterprises work within the expansive context of the United Nations Millennium Development Goal framework and progress reports. The eight objectives of the UN Millennium Development Goals (MDG) agreed upon by all member nations in September 2005 provide a social entrepreneurship course framework for a rigorous understanding of how to eliminate extreme global poverty.

The eight specific UN Millennium Development Goals are:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education.
3. Promote gender equality in empower women
4. Reduce child mortality.
5. Improve maternal health.
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

From the perspective of goal setting theory, MDG goals are written with the specific target completion date of 2015, a date that the member countries of the UN and the world's development organizations all agreed in 2000 was both a worthy and attainable goal. The Millennium Development Goals serves as an excellent frame for describing and understanding social benefit ventures these are well-know international goals, specific and measurable, and
annual progress reports will be U.N. published every July until 2015. United States Secretary-General Kofi A. Annan (2006) expressed the MDG goals in the following words:

“We will have time to reach the Millennium Development Goals - worldwide and in most, or even all, individual countries - but only if we break with business as usual. We cannot win overnight. Success will require a sustained action across the entire decade between now and the deadline. It takes time to train the teachers, nurses and engineers; to build the roads, schools and hospitals; to grow the small and large businesses able to create the jobs and income needed. So we must start now.”

Social Venture Organizational Analysis

Given the above broad global framework, this paper moves to focus beyond the individual social entrepreneur and attend to the creation of new social ventures and the legal and organizational form questions and answers that will foster more effective achievement of a social enterprise mission. This includes new legislation creating new social purpose organizational forms and structures and an examination of the interesting and innovative ways various nations and U.S. states have approached and addressed the clear and present needs of social entrepreneurs for more effective organizations.

Social entrepreneurship comprises organizations that create social value. The broad array of global social ventures includes numerous organization forms utilized to change the world and improve human life and the planet. Existing organization legal forms include: government agencies, non-government organizations (NGO), non-profit organizations, established business firms, start-up and growing entrepreneurial firms, and various hybrid-form or blended-form organizations.

Additional specific type social ventures include: cooperative enterprises, village or farmer or fishing cooperatives, religious social benefit organizations, government or private aid organization supervised ventures. Numerous combinations and hybrids are created involving different combinations of for-profit, non-profit, joint-venture, and other alliances. Currently there
is a world-wide movement to design new legal organization forms through national legislation in order to benefit social entrepreneurship ventures. These new legal forms move beyond the old tired discussions and choices of entrepreneurs selecting either for-profit or non-profit organization forms to achieve creation of social value.

A primary purpose of this paper is to provide a global conceptual framework to provide “…ways to improve the odds that social entrepreneurship might succeed by helping entrepreneurs. . . creating organizations that provide the kind of high performance needed for sustainable change” (Light, 2008: xi). The paper’s focus is on increasing a social entrepreneur’s choices in designing or choosing a legal structure and organizational form that will maximize their social ventures performance and ability to create social value and positive social change.

Contribution of Organizational Institutional Theory to Understanding New Forms

Organizational theory is important for a clearer understanding of how social enterprises operate (Mair & Martin, 2006) and to better understand specific contributions organizational scholars (DiMaggio & Powell, 1983) can provide in the way of theory and practical advice (Kilduff, 2006). Advice to begin a research project with field experience problems, formulate an initial theory, and then read and engage the ideas of previous scholars with the goal to design and conduct original research (Hambrick, 2005) is used here in developing the reasoning for employing organizational institutional theory to conduct social enterprise research.

Scott’s Three Pillars of Institutions

This paper closely follows the path of Scott’s organizational institutional theory perspective (Scott, 2008: 48) within which he states institutions: “…provide stability and meaning to social life”. Scott’s conceptual framework consists of his three pillars of institutions which are defined with the following system components.
Regulative systems
- Follow rules and laws
- Sanctions exist
- Coercive enforcement
- Practical logic
- Indicators – Rules, laws, sanctions
- Legitimacy based on legal sanctions

Normative systems
- Social obligation compliance
- Social expectations limit behavior
- Normative enforcement
- Indicators – certification, accreditation
- Legitimacy based on morality and expectations

Cultural-Cognitive systems
- Cultural understanding based on taken-for-granted behaviors
- Schema shapes actions
- Mimetic influences structures
- Indicators – shared beliefs and logics, isomorphism
- Legitimacy based on culture with shared beliefs and comprehensible behaviors

All three of these pillars of institutions construct organizational legitimacy in their own unique way. The reason for an emphasis on legitimacy is because this is crucial for understanding social enterprise performance. Social entrepreneurs who construct new social ventures that conform to socially accepted rules and legal norms are more likely to succeed because they are better able to access volunteer human resources and financial resources. This paper examines the multiple problems that social venture entrepreneurs face as they navigate the unknown spaces between normative non profit organizations and traditional business for profit organizations.

Regulative Pillar of Organizational Institutional Theory

This paper will focus on the regulative pillar of organizational institutional theory to explore how and why social entrepreneurs around the world are experimenting with cobbling together different legal organizational forms attempting to create organizations to provide
legitimacy to help more directly address the needs of mission-focused social value creating enterprises.

It is common for social entrepreneurs to establish two or three or four distinct legal organizations to support their social value creation plans. Selection of a legal form helps frame questions of ownership, capital structure, governing and control, and executive and operational management of an organization. Business for profit structures allow for freedom and flexibility, while a non profit organization is tax-exempt, has the ability to receive tax-deductible contributions or foundation funding, and benefits from perceptions of non profit trustworthiness. Social enterprise examples include a for-profit organization with a non profit complimentary organization, or a non profit with an earned income for-profit complimentary organization, or multiple combinations of these variations.

One example (2009 author interview) involves two medical doctors (MDs) from Cleveland who teach basic medical skills to village doctors in Central America. They have their non profit organization along with their for profit organization with four different websites about different educational and business aspects of their medical practice, training, and medical equipment. They might be more effective with one comprehensive organization that meets all of their diverse needs to provide medical care to poor people in rural villages.

When practical problems are examined with an organization theoretical lens focusing on the underlying resource and legitimacy needs of a social venture, it becomes more straightforward to discover what components of for-profit or non profit organizations are most needed. The country examples presented next show various solutions to the organizational form problem faced by numerous social entrepreneurs and their new ventures.

*Country Examples of Social Venture Legislative Innovations*
England, Wales, and Scotland – Social enterprises defined by the UK government consist of “businesses with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community…” The new organization form Community Interest Company (CIC) become law on July 1, 2005. Registering as a CIC requires a two-step process: (1) register under the Companies Act (1985) limited by guarantee or limited by shares and (2) apply for CIC status to the Regulator of Community Interest Companies. A CIC legal form must meet a community interest test, operate for public benefit, and does not have charitable status. The main innovation of the CIC form is that this organization form is asset locked exclusively for community benefits and thus assures that profits are reserved for social purposes and benefits.

Northern Ireland – The CIC form has been legal since April 6, 2007 following extension of the Companies (Audit, Investigations and Community Enterprise) Act (2004) and follows UK legal formats.

Ireland – NGOs are not required to benefit the public to be established, but NGOs must have a public benefit to become an established charity. The Designated Activity Company (DAC) will be the new legal form for the Republic of Ireland under the 2009 Charities Act. Charitable purpose is defined as including poverty prevention or relief, advancing education or religion, or any other community benefit. A DAC form is different from other types of limited companies because they will be able to designate a specific cause (not shareholders) as beneficiary of profits. Similar to the UK regulations, DACs are private companies limited by either (1) shares or (2) guarantees and also possessing capital shares.

Canada – Social venture proponents are working to create new legislation to create new hybrid organizational forms similar to the UK CIC. The Muttart Foundation reported in a 2006
survey that 85% of Canadians thought charities should be allowed earned income, as long as the charity goals were supported. Former Canadian Prime Minister Paul Martin is a strong supporter of new organizational forms that fit within Canada Revenue Agency (CRA) charitable giving regulations.

United States – The new low-profit limited liability company (L3C) legislation is designed to bridge the existing gap between for-profit and non-profit organizational legal forms (Reiser, 2009). L3C is clearly a hybrid-form combining the business limited liability company (LLC) with a stated focus on achieving social value and benefit. L3C is legally a for-profit legal form that must “significantly further the accomplishment of one or more charitable or educational purposes” and follows IRS regulations in order to receive program-related investments (PRIs) that qualify for charitable purpose tax treatment. As of October 2009, an L3C can be formed in Michigan, Vermont, Wyoming, Utah, Maine, Crow Indian Nation, Oglala Sioux Tribe, and effective January 1, 2010 in the state of Illinois.

Argentina – Civil society organizations have traditionally been based on cooperatives and other mutual benefit organization forms handed down from European immigrants who settled in Argentina (Janelle A. Kerlin, In Press). Political action is important and has an effect on recommendations for future legislation for new social venture organization forms. Argentine social enterprise organizations called regained companies are being created on the ruins of failed company organizational shells and reconstructed as worker social cooperative organizations.

Philippines – The many failures of government poverty solutions over the years have led citizens to create numerous organizational form solutions combining community initiatives and market-based legal forms. Current law requires that a NGO or NPO to be government accredited no part of income or assets may benefit any members or officers. Cooperative and religious
organizations are currently seeking new legal organization form legislation that will create laws that better reflect the ground reality of the social activities that they perform.

*Japan* – Social enterprise is a new concept in Japan that provides a business model for non profit organization earned income. Japanese discuss this topic with the name Non Profit and Co-operative Sector (Ishizuka, 2002). Social enterprise advocates have proposed legislation that may include variations of both the UK public-benefit test and the USA public support-test. Field experiments are currently underway comparing non-profit vs. privately owned long-term medical care hospitals and patient outcomes. In 2008 new laws were enacted for government committees (one national and 50 for prefectures) to determine if “Associations and Foundations of Public Interest” were planning on operating for the public interest.

**Conclusion and Recommendations for Future Research**

The paper concludes with research recommendations for future studies comparing different types of new global social venture organizational forms and their resulting outcomes of social venture human and financial resource acquisition, social legitimacy, and the creation of social value for individuals, communities, nations, and the planet. The country and state new legislative examples presented in this paper are quite recent and many other nations are in the process of writing, discussing, passing, and implementing new social benefit organization laws.

The concepts and research findings presented in this paper are preliminary and represent the beginning of a much larger global research project on new legislation around the globe.


Drayton, W. 2007b. The Monday Interview: William Drayton 'Social Entrepreneurship was an Oxymoron, Today it is Different', The Financial Express.


The effectiveness of entrepreneurship education:

a study on an intentions-based model towards behavior

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Keywords: entrepreneurship, attitudes, subjective norm, perceived behavioral control, intentions, behavior, theory of planned behavior

Abstract

The growing attention for entrepreneurship education has resulted in a wide variety of articles about this topic and an ongoing debate about whether or not entrepreneurship can be learned, and if so how this can or should be done. We use a quasi experimental design to test the effectiveness of an entrepreneurship program, relying on theory of planned behavior. The findings suggest that students participating in the entrepreneurship course with an (auto)biography assignment, compared to students who followed a different non-entrepreneurship course, show an increase in the antecedents of intentions (attitude, perceived behavioral control, self-efficacy). Furthermore they have higher entrepreneurial intentions at the end of the program. Finally, these students do also pursue these intentions in their actual start-up behavior.

1 We thank Ernst-Jan Ottenhoff and Sarah Weber for their research help
Introduction

But whereas much of today’s discussion treats entrepreneurship as something slightly mysterious, whether gift, talent, inspiration, or ‘flash of genius,’ this book represents innovation and entrepreneurship as purposeful tasks that can be organized – are in need of being organized – and as systematic work (Drucker 1985: vii).

Entrepreneurship education has become a serious matter for university administrators, course developers, and researchers. The growing focus on entrepreneurial education has resulted in a wide variety of articles about this topic and an ongoing debate about whether or not entrepreneurship can be learned (Henry et al., 2005). However, there is ongoing debate in the entrepreneurship academy about whether or not entrepreneurship can be taught (Fiet, 2000). Additionally, while some studies indicated that entrepreneurship behavior can be taught (DeTienne & Chandler, 2004; Peterman & Kennedy, 2003), other studies found even negative effects of entrepreneurship education (Oosterbeek et al., 2010). Therefore, this study investigates the impact of entrepreneurship education on entrepreneurial behavior.

Our approach relies on theory of planned behavior (Ajzen, 1988, 1991) to explain how entrepreneurship education affects entrepreneurship behavior. Intention models focus on attitudes and their antecedents and have been proposed to better explain the entrepreneurial processes. As new organizations emerge over time, pre-organizational phenomena such as deciding to initiate an entrepreneurial career are both important and interesting (Bird, 1988). We may conclude that intentionality is typical of emerging organizations. Some researchers consider the intent to start a business venture as the result of an entrepreneurial intention (Bird, 1988; Krueger, 2000) while other researchers defined entrepreneurial intention as an objective to own a business (Kolvereid, 1996). Davidsson (1995) has developed an economic-psychological model of factors that
influence individuals’ entrepreneurial intentions. This model argued that the primary
determinant of entrepreneurial intentions is a person’s conviction that starting an own
business is a suitable career alternative for him or her. While background factors such as
education and vicarious experience have been recognized as influencing people’s
intentions regarding entrepreneurial activity, little is known how an entrepreneurial
teaching program, apart from general education, influences the attitudes and perceptions
of entrepreneurship (Davidsson, 1995). The student who starts with an entrepreneurial
teaching program have already passed this stage, but most of them are in the beginning of
opening themselves to entrepreneurial knowledge. So it would be plausible to assume
that the short-term objective of an entrepreneurial teaching program is to create a positive
attitude towards entrepreneurship. Instilling the belief that becoming an entrepreneur is a
realistic possibility is also a key objective. This perception of the difficulty of becoming
an entrepreneur, also known as perceived behavioral control, is something that can be
influenced by a teaching program. Intentions are assumed to be a motivation to certain
behavior and, moreover, intentions can be influenced. A central element in the process of
becoming an entrepreneur is each individual’s perception of himself (self-efficacy) and
his motivational structure.

Most studies in the research domain of entrepreneurial intentions actually did not
take into consideration what happens after entrepreneurial intentions are formed and the
longer-term impact of intentions on behavior. This study takes a deeper look at this
relationship between intentions and their effects, intending to gain novel insights of
whether these intentions identified previously actually lead to entrepreneurial behavior.
While theory of planned behavior has been used to explain the effectiveness of
entrepreneurship education, to our knowledge, only one study included entrepreneurial behavior into their design (Souitaris et al., 2007). However, this study did not find a significant relationship with entrepreneurial behavior. We think that this is partly due to a limited time frame used in this study, because the effect of intentions on behavior may evolve over time. Therefore, our approach uses a two years time lag to test the effectiveness of entrepreneurship education.

Finally, most studies evaluating the effectiveness of entrepreneurship education did not use a pre-test and post-test design, and also missed including a control group which means they suffer from several methodological limitations. This brings us to the focus of this paper: overcoming the methodological limitations of earlier entrepreneurship research and look at the relationship between an entrepreneurial teaching program, the intentions of students participating in it and their subsequent entrepreneurial behavior. Thus, our main research question reads: Do entrepreneurial intentions translate into entrepreneurial behavior? The significance of this study is whether these intentions actually lead to entrepreneurial behavior of the respondents, making it possible to more reliably determine the chance of ambitious would-be entrepreneurs actually starting their own business. It is important to know what drives a student’s decision to become self-employed and start for him/herself.

Theories and hypotheses

Entrepreneurial intentions are said to be the source of entrepreneurial behavior (Krueger et al., 2000). Intentions are said to stem from different sources. According to
Ajzen (1988), who established the theory of planned behavior, intentions consist of three elements. These are attitude toward entrepreneurship, social norms and perceived behavioral control and they lead as a whole to entrepreneurial intentions because each one of them focuses on a different important aspect of an intention. It is commonly argued that intentions help stimulate entrepreneurial behavior (i.e. Ajzen, 1991; Krueger et al., 2000. The model of Ajzen (1988) forms the basis of this research and assists in explicating the theory of planned behavior. Ajzen (1988) attempts to clarify the relationship among intentions and behavior. He argues that, in general, the stronger an individual’s intention to perform a specific behavior, the higher the likelihood of doing so in the future. According to Ajzen (1991), entrepreneurial intentions are shaped by three different factors which are attitudes, subjective norms and perceived behavioral control. In detail, Ajzen (1991, pp. 188) refers to attitudes as: ‘The degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question.’ Linking this to entrepreneurship, one of the independent variables is named ‘attitude toward behavior, in particular entrepreneurship’. This refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (i.e. the opinion of an individual as to how he or she assesses key entrepreneurial acts such as seizing opportunities and considering new venture creation). The second factor, subjective norm, represents the perceived social pressures of others to perform or not to perform certain actions. This independent variable measures the extent to which an individual places an emphasis on the opinions of people close to him or her. As such it is a multiplication of perceived beliefs of important members in their reference group
(friends, family and others) and the degree to which someone feels (s)he will comply with them.

Lastly, perceived behavioral control reflects perceptions regarding behavior as personally controllable as well as notions relating to the ease or difficulty of initiating something (i.e. becoming an entrepreneur), including the influence of possible past experiences and expected difficulties that may arise. For example, perceived behavioral control could be an individual’s belief about the availability of resources and how well resources and opportunities can be exploited. Krueger et alia (2000) find strong support for Ajzen’s (1991) construct with regards to statistical outcomes. Also, Krueger and his associates (2000) argue that this intentions model is a very valuable predictor for entrepreneurial behavior, as especially attitudes, intentions and behavior are closely interrelated. Research on entrepreneurial intentions has often used students as a sample (e.g. Autio et al., 2001; Crant, 1996; Lüthje & Franke, 2003). Krueger et alia (2000) tested the TPB model and found that the model gave significant prediction of intentions. From a database of 185 independent studies published up to the end of 1997, TPB accounted for 27% and 39% of the variance in behavior and intentions, respectively (Armitage & Conner, 2001). At this point, we hypothesize that:

\[ H1: \text{It is expected that an individual's attitude towards the concept of entrepreneurship partly leads to forming entrepreneurial intentions.} \]

\[ H2: \text{It is expected that subjective norms partly lead to forming entrepreneurial intentions.} \]

\[ H3: \text{It is expected that perceived behavioral control partly leads to forming entrepreneurial intentions.} \]
Intention models are a good framework for looking at the influence of entrepreneurship education on entrepreneurial intentions. TPB is well tested and robust theoretical model for researching intentions. Davidsson (1995) argued that the TPB is a model with which the all pervading question within the entrepreneurship field of ‘how does a person become an entrepreneur’ can be answered. Therefore TPB is the theory of choice for most scholars researching entrepreneurial intentions. TPB states that actual behavior is a direct consequence from the intentions towards that behavior and argues that the more favorable the attitude and subjective norm with respect to behavior and the greater the perceived behavioral control, the stronger an individual’s intention to perform the behavior under consideration should be. Intentions, and more specifically, entrepreneurial intentions, are said to have different origins, according to today’s body of literature. However, with the help of Ajzen’s (1991) model of planned behavior it is possible to not only make the antecedents of entrepreneurial intentions clear, but also, that these antecedents can be modified and, thereby, affect the decision of starting up a business venture. Attitudes can be changed by changing the beliefs about the favorability of entrepreneurial behavior.

Entrepreneurship education, therefore, often stresses how rewarding entrepreneurial behavior is, explaining the merits of innovation and opportunity exploitations and decreases spurious beliefs about the downside of business venturing and failure. Perceived control can be changed by modifying beliefs about the availability of resources. This can be accomplished by providing knowledge about how to access resources, by increasing perceptions of self-efficacy, providing mastery experiences, and
dispelling spurious experiences of infeasibility. And that this is certainly affected by teaching e-ship. Therefore, we hypothesize that:

\[ H4: \text{Participation in the entrepreneurial teaching program will positively influence the student’s attitude towards an entrepreneurial career.} \]

\[ H5: \text{Participation in the entrepreneurial teaching program will positively influence the student’s perceived behavioral control.} \]

Not only are intentions expected to lead to behavior, but also the three variables from Ajzen’s (1991) model might have an influence on entrepreneurial behavior, possibly mediated by intentions. Since hypotheses 1, 2, 3 and subsequently 4 are all anticipated to hold causal relationships, a mediation by entrepreneurial intentions is not unlikely and therefore we will examine this as well. The above literature review makes identifying what actions are required in the start-up process relatively straightforward. Despite different scholars suggesting diverse levels of entrepreneurial behavior, some common ground is found among which is business planning, creating a legal entity, and providing and acquiring funding. With the help of the identified conditions, it is easier to draw the line between serious attempts to start a venture as opposed to individuals that simply consider starting a business. After depicting that intentions are a reliable predictor of behavior and explaining the steps that make entrepreneurial behavior, hypothesis 6 reads:

\[ H6: \text{It is expected that entrepreneurial intentions lead to entrepreneurial behavior.} \]
Consequently, hypotheses 7, 8 and 9 concerning a possible mediating relationship of intentions translate into:

\textit{H7: It is expected that attitude toward entrepreneurship leads to entrepreneurial behavior, with entrepreneurial intentions mediating.}

\textit{H8: It is expected that subjective norms lead to entrepreneurial behavior, with entrepreneurial intentions mediating.}

\textit{H9: It is expected that perceived behavioral control leads to entrepreneurial behavior, with entrepreneurial intentions mediating.}

\textit{Intermezzo: the subprogramme Fundamentals of entrepreneurship}

The two courses discussed here, Foundations of Entrepreneurship and Titans of venturing, make up the full-time Fundamentals subprogram taking two months of the one-year MSc BA/Entrepreneurship program at Rotterdam School of Management, Erasmus University (The Netherlands). In a two month block students become familiar with classic and contemporary debates in the field of entrepreneurship as an academic discipline. At the end of this core course they realize that it is a multidisciplinary field of study, which has been examined over time by various disciplines and which can be researched at various levels. The Foundations course addresses three main questions: (1) who becomes an entrepreneur, (2) how do entrepreneurs create new ventures, and (3) what contributes to and explains their entrepreneurial success. The approach taken in this course draws on the
contributions to the field by scholars in economics, psychology, and sociology (e.g. Schumpeter, Frese, Aldrich) and how these three disciplines have provided similar or different answers to the questions mentioned above. By confronting the different issues and items in the field of entrepreneurship from a range of disciplines and perspectives, students will be able to judge advances in theory development, analytical tools and relevance.

Alongside to this theoretical Foundations course, there is the ‘Titans in venturing’ course in which the students read a biography of an entrepreneur, analyze it and finally write a biography assignment. The objective of the Titans is to apply theory and concepts from the Foundations course to the life course of a selected more or less famous entrepreneur and learning from his motivations, networking skills and best practices. These theories and concepts originate from psychology, economics and sociology and entrepreneurs that have been chosen for the biography paper include Walt Disney, Donald Trump, Ralph Lauren, Jamie Oliver, Calvin Klein, and John de Mol. In order to allow the biography assignment as a learning project to be carried out successfully, a well-documented and balanced biography on a thriving entrepreneur and/or a dynamic firm is required (hence the title of this course: titans of venturing). After having checked its availability, students can effectively claim the (auto)biography of their ‘titan entrepreneur’ on the basis of first to come first to serve. In order to apply and integrate the insights from the disciplines and the field of multidisciplinary field of entrepreneurship, students are asked to write a paper on the life history of a thriving entrepreneur and/or a dynamic firm, as documented in their (auto)biographies. By doing the literature/biography paper students are actively encouraged to apply the concepts,
theories and tools from the three mother disciplines as discussed in the Foundations course, and link them to the particular evolution of the careers and life courses of entrepreneurs and the emergence and growth of new firms and industries. The Biography assignment will be concluded by a joint session of poster presentations by the various teams and a plenary information exchange where everyone provides the key information on their ‘Titan in venturing’ on posters hanging against the wall. This concluding event is also the deadline for submitting the final version of the Titans of Venturing paper.

In the September-October term of 2007, a total group of 101 students and 52 teams selected 52 titans of venturing, with their lifes and times covered in and by (auto)bigraphies. The evaluations of the course were reasonable positive, not clearly outstanding but just about average with scores between 3.6 and 4.0 on a five point scale. Some of the written comments observations and learning experiences: ‘It is a really interesting and funny way to integrate important learning points from for example the articles of Foundations and actually learn through someone else’s experiences’, and ‘An entertaining and creative way of learning about a successful entrepreneur and applying the taught literature to his life career. The course is open and gives you freedom, allows you to be creative.’

**Methodology**

*Design.* Our quasi experimental design consisted of two groups of Master students from the Erasmus University Rotterdam. The treatment group consisted of students of the Master program Entrepreneurship and New Business Venturing, the control group of
Supply Chain Management. Both groups participated in a pre-test at the beginning of the course and a post-test, which was administered at the end of the course. Finally, we measured start-up behavior one year after the course was completed. All independent variables were measured at the pre-test, pros-test and one year after the course was completed.

*Sample.* 96 Entrepreneurship students and 57 Supply Chain Management students participated in the pre-test of the study. The post – test was completed by 88 entrepreneurship students and 54 students from Supply Chain Management (experimental mortality 8,3 percent and 5,3 percent, respectively). Finally, the assessment of start up behavior was collected form 62 Entrepreneurship students and 12 students from the Supply Chain Management Master; the response rate was 69.3 percent and 22.2 percent, respectively.

*Measures*

*Intentions.* Entrepreneurial intentions were measured by the extent to which an individual seriously considers becoming an entrepreneur as a possibility to pursue. We used six items from Linan and Chen (2006). The scale was internally consistent (Cronbach’s α of .947).

*Attitude.* The attitude toward entrepreneurship is an independent variable and represents the notion of how an individual evaluates a possible behavior in terms of consequences (Ajzen, 1991). We measured attitude by five items from Kolvereid (1996). Cronbach’s α was .933.
**Subjective norm.** Subjective norms was measured by whether individuals intention to start a business are influenced by external social pressures, in this case friends, family members or people important to them. We used a six item scale from Kolvereid (1996); the Cronbach’s α was .809.

**Perceived behavioral control.** We assessed perceived behavioral control by the extent to which an individual rates a business opportunity as feasible and to what extent he or she can influence the resulting outcome. Specifically, we created questions with the help of examples made by Ajzen (2002) in his research, as no precise measurement scale for this item was available. The Cronbach’s α was .726.

**Entrepreneurial behavior.** Entrepreneurial behavior is the dependent variable in the conceptual model and questions from four different sources were combined. A list of 18 items has been established from (Carter, Gartner, & Reynolds, 1996; Gartner & Carter, 2003) and the Chamber of Commerce, of which Table 1 provides an overview. The items in Table 1 were asked as an entire set of questions to the respondents. They are dichotomous in nature and are therefore dummy variables. In the last column the alphas of the types of behavior are shown in the table as α if item deleted. In addition, we used 5 items from the Global Entrepreneurship Monitor (Reynolds et al., 2005). In order to obtain a single measure for entrepreneurial behavior, all items corresponding to this variable were z-standardized. After eliminating six items, Cronbach’s α amounted to .927. As a result, the remaining 17 items were added together and divided by 17.

Table 1: Questionnaire Items Entrepreneurial Behavior
Results

Notably, one year after the course, 39 respondents were involved in setting up a business. Table 2 displays the Pearson Correlation statistics for all variables.

Table 2: Intercorrelations of study variables

<table>
<thead>
<tr>
<th>Item No</th>
<th>Type of Entrepreneurial Behavior</th>
<th>Cronbach's α if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E6: Spent a lot of time thinking about starting a business</td>
<td>7.75</td>
</tr>
<tr>
<td>2</td>
<td>E7: Organized a start-up team</td>
<td>7.74</td>
</tr>
<tr>
<td>3</td>
<td>E8: Defined market opportunities</td>
<td>7.73</td>
</tr>
<tr>
<td>4</td>
<td>E9: Prepared a business plan</td>
<td>7.79</td>
</tr>
<tr>
<td>5</td>
<td>E10: Selected a business name</td>
<td>7.86</td>
</tr>
<tr>
<td>6</td>
<td>E11: Created a legal entity</td>
<td>7.64</td>
</tr>
<tr>
<td>7</td>
<td>E12: Registered with the tax authorities</td>
<td>7.64</td>
</tr>
<tr>
<td>8</td>
<td>E13: Saved money to invest in business</td>
<td>7.90</td>
</tr>
<tr>
<td>9</td>
<td>E14: Invested own money to invest in business</td>
<td>7.67</td>
</tr>
<tr>
<td>10</td>
<td>E15: Required and received financial support</td>
<td>7.65</td>
</tr>
<tr>
<td>11</td>
<td>E16: Searched for facilities and equipment</td>
<td>7.63</td>
</tr>
<tr>
<td>12</td>
<td>E17: Purchased or leased major items like equipment, facilities or property</td>
<td>7.68</td>
</tr>
<tr>
<td>13</td>
<td>E18: Purchased raw materials, inventory, supplies</td>
<td>7.72</td>
</tr>
<tr>
<td>14</td>
<td>E19: Developed model or procedures for product/service</td>
<td>7.67</td>
</tr>
<tr>
<td>15</td>
<td>E20: Started marketing or promotional activities</td>
<td>7.74</td>
</tr>
<tr>
<td>16</td>
<td>E21: Devoted full time to the business</td>
<td>7.74</td>
</tr>
<tr>
<td>17</td>
<td>E22: Applied for licenses and patents</td>
<td>7.76</td>
</tr>
<tr>
<td>18</td>
<td>E23: Hired employees</td>
<td>7.63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intention t1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2. Attitude t1</td>
<td>.89**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sub. Norm t1</td>
<td>.44**</td>
<td>.45**</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Beh. control t1</td>
<td>.46**</td>
<td>.51**</td>
<td>.35**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Intention t2</td>
<td>.89**</td>
<td>.89**</td>
<td>.43**</td>
<td>.41**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Attitude t2</td>
<td>.85**</td>
<td>.90**</td>
<td>.42**</td>
<td>.48**</td>
<td>.92**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sub. Norm t2</td>
<td>.42**</td>
<td>.42**</td>
<td>.85**</td>
<td>.30**</td>
<td>.44**</td>
<td>.44**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Beh. control t2</td>
<td>.56**</td>
<td>.69**</td>
<td>.31**</td>
<td>.75**</td>
<td>.50**</td>
<td>.64**</td>
<td>.32**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Intention t3</td>
<td>.78**</td>
<td>.72**</td>
<td>.38**</td>
<td>.26**</td>
<td>.80**</td>
<td>.76**</td>
<td>.33**</td>
<td>.48**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Attitude t3</td>
<td>.71**</td>
<td>.69**</td>
<td>.31**</td>
<td>.26**</td>
<td>.68**</td>
<td>.69**</td>
<td>.28**</td>
<td>.47**</td>
<td>.87**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Sub. Norm t3</td>
<td>.54**</td>
<td>.54**</td>
<td>.66**</td>
<td>.40**</td>
<td>.53**</td>
<td>.53**</td>
<td>.59**</td>
<td>.32**</td>
<td>.58**</td>
<td>.53**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Beh. control t2</td>
<td>.38**</td>
<td>.43**</td>
<td>.29**</td>
<td>.43**</td>
<td>.42**</td>
<td>.41**</td>
<td>.25**</td>
<td>.30**</td>
<td>.48**</td>
<td>.54**</td>
<td>.33**</td>
<td></td>
</tr>
<tr>
<td>13. Entr. Behavior</td>
<td>.55**</td>
<td>.48**</td>
<td>.30**</td>
<td>.18**</td>
<td>.56**</td>
<td>.54**</td>
<td>.24**</td>
<td>.30**</td>
<td>.67**</td>
<td>.58**</td>
<td>.42**</td>
<td>.46**</td>
</tr>
</tbody>
</table>
Hypotheses Testing

In order to test hypotheses 1, 2 and 3 stating that attitudes, perceived behavioral control and subjective norms are positively related to the intention to start a business, we looked at the lagged effects where we could hold prior intentions constant. The results are displayed in Table 3.

Table 3: Attitudes, perceived behavioral control and subjective norms predicting intentions.

<table>
<thead>
<tr>
<th>Control Variable</th>
<th>Intentions t2</th>
<th>Intentions t3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentions t1</td>
<td>0.890**</td>
<td>-</td>
</tr>
<tr>
<td>Intentions t2</td>
<td>-</td>
<td>0.797**</td>
</tr>
<tr>
<td>R square</td>
<td>0.791</td>
<td>0.636</td>
</tr>
<tr>
<td>Δ R square</td>
<td>0.791</td>
<td>0.636</td>
</tr>
<tr>
<td>df (1, 2)</td>
<td>1.71</td>
<td>1.71</td>
</tr>
<tr>
<td>F</td>
<td>269.347**</td>
<td>123.685**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Intentions t2</th>
<th>Intentions t3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude t1</td>
<td>0.431**</td>
<td>-</td>
</tr>
<tr>
<td>Subjective Norm t1</td>
<td>0.027</td>
<td>-</td>
</tr>
<tr>
<td>PBC t1</td>
<td>-0.059</td>
<td>-</td>
</tr>
<tr>
<td>Attitude t2</td>
<td>-</td>
<td>0.213</td>
</tr>
<tr>
<td>Subjective Norm t2</td>
<td>-</td>
<td>-0.027</td>
</tr>
<tr>
<td>PBC t2</td>
<td>-</td>
<td>-0.027</td>
</tr>
<tr>
<td>R square</td>
<td>0.828</td>
<td>0.642</td>
</tr>
<tr>
<td>Δ R square</td>
<td>0.037</td>
<td>0.007</td>
</tr>
<tr>
<td>df (1, 2)</td>
<td>3.68</td>
<td>3.68</td>
</tr>
<tr>
<td>F for Δ R square</td>
<td>4.365**</td>
<td>0.416</td>
</tr>
</tbody>
</table>

Note: Displayed coefficients are standardized betas. *p<.05 **p<.01

Table 3 shows that attitudes measured in the pre-test positively affected intentions in the post-test. However, attitudes did not predicted intentions one year after the course. Therefore, we found partial support for Hypothesis 1. Hypotheses 2 and 3 had to be rejected at all times in the longitudinal analysis. Concluding, perceived behavioral control showed no significance with intentions on either level of analysis. On the longitudinal level of research, only attitude appeared to be having a significant relationship with intentions. In other words, subjective norms and perceived behavioral control previously held do not influence later entrepreneurial intentions. An overall reason for this outcome
could be that this model in fact only holds for the same point of measurement and does not have any long-term effects. As for the insignificance in subjective norms, a cause could be that this is due to a cultural matter. The Dutch might not place a lot of importance on family’s and friend’s opinions. Concerning the other variables, further personal development or experience gained in the mean time might have caused the respondents to revise their answers. However, not only the independent variables could be the reason for the insignificant relationship, but also a change in entrepreneurial intentions over time could have occurred.

Hypotheses 4, and 5 stated that attitudes and perceived behavioral control were significantly increased by participating in entrepreneurship education. In order to test this hypothesis, we compared the means of the pre-test with the means of the post test separately for the experimental group (entrepreneurship students) and control group (supply chain management). The results are displayed in Table 4.

Table 4: Mean results pre- and post test.
Our results confirmed Hypothesis 4. The entrepreneurship students significantly increased their attitude towards entrepreneurship, while the supply change management students did not increase their attitude towards entrepreneurship. Moreover, this set of analyses supported Hypothesis 5. Perceived behavioral control was significantly increased for entrepreneurship students, while it was not increased for supply change management students.

Hypothesis 6 was concerned with the relationship among entrepreneurial intentions and behavior. A regression analysis was conducted in this case, measuring the influence from the results of the second measurement (t2) on the results of the third measurement (t3). By doing so, we could analyze a time lag in the effect on behavior at t3. Table 5 depicts the results of this analysis.

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Significance (t-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>5.97</td>
<td>6.18</td>
<td>3.83**</td>
</tr>
<tr>
<td>PBC</td>
<td>5.35</td>
<td>5.60</td>
<td>2.71**</td>
</tr>
<tr>
<td><strong>Control group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>4.22</td>
<td>4.22</td>
<td>0.37</td>
</tr>
<tr>
<td>PBC</td>
<td>4.67</td>
<td>4.61</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Table 5: Results The effect of intentions on behavior
Concerning the relationship between intentions (t2) and behavior (t3), while controlling for age and gender, the beta of .443 showed significance at \( p < .01 \), indicating that earlier intentions held by the respondents influenced their later entrepreneurial behavior positively. Thus, hypothesis 6 was supported.

Hypotheses 7, 8 and 9 stated that the relation of attitudes, subjective norms, and perceived behavioral control on behavior was mediated by intentions. For these three hypotheses, the mediator test by Baron and Kenny (Baron & Kenny, 1986) was employed. Table 6 displays the results for the test of Hypothesis 7.

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>( R^2 )</th>
<th>( \Delta R^2 )</th>
<th>df (1,2)</th>
<th>F</th>
<th>( \Delta R^2 )</th>
<th>df (1,2)</th>
<th>F for ( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age t2</td>
<td>0.281**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender t2</td>
<td>0.361**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>0.225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Delta R ) square</td>
<td>0.225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>df (1,2)</td>
<td>2.7</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>F</td>
<td>10.143**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 6: Intentions mediating the relationship between attitudes and performance.
From the results in Table 6 it showed that the first three steps of Baron and Kenny’s (1986) model are met. The effect of attitudes on behavior became insignificant when controlling for intentions (Step 3/4 of the regression analysis). Thus, in support for Hypothesis 7, the effect of attitudes in behavior was fully mediated by intentions. However, we had to reject Hypothesis 8 and Hypothesis 9, because both subjective norms and perceived behavioral support were not significantly related to entrepreneurial behavior (see Table 7 and Table 8).

Table 7: The relationship between subjective norms and behavior

<table>
<thead>
<tr>
<th></th>
<th>Step 1 Entrepreneurial Behavior</th>
<th>Step 2 Entrepreneurial Intentions</th>
<th>Step 3/4 Entrepreneurial Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( \beta )</td>
<td>( \beta )</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.249*</td>
<td>0.290**</td>
<td>0.190</td>
</tr>
<tr>
<td>Gender</td>
<td>0.368**</td>
<td>0.248*</td>
<td>0.258*</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude t1</td>
<td>0.369**</td>
<td>0.851**</td>
<td>-0.072</td>
</tr>
<tr>
<td>Intentions t2</td>
<td></td>
<td></td>
<td>0.517*</td>
</tr>
<tr>
<td>R square</td>
<td>0.328</td>
<td>0.792</td>
<td>0.383</td>
</tr>
<tr>
<td>( \Delta R ) square</td>
<td>0.120</td>
<td>0.638</td>
<td>0.056</td>
</tr>
<tr>
<td>df (1,2)</td>
<td>1.69</td>
<td>1.69</td>
<td>1.68</td>
</tr>
<tr>
<td>F for ( \Delta R ) square</td>
<td>12.278**</td>
<td>211.147**</td>
<td>6.145*</td>
</tr>
</tbody>
</table>

Note. Displayed coefficients are standardized betas. *p<.05 **p<.01
Table 8: The relationship between perceived behavioral control and entrepreneurial behavior.

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.249*</td>
</tr>
<tr>
<td>Gender</td>
<td>0.368**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective Norm t1</td>
<td>0.212</td>
</tr>
<tr>
<td>Rsquare</td>
<td>0.250</td>
</tr>
<tr>
<td>Δ Rsquare</td>
<td>0.042</td>
</tr>
<tr>
<td>df (1,2)</td>
<td>1.69</td>
</tr>
<tr>
<td>F for Δ R square</td>
<td>3.880</td>
</tr>
</tbody>
</table>

Note: Displayed coefficients are standardized betas. *p<.05 **p<.01

Conclusion and discussion
The aim of this study was to test the effectiveness of entrepreneurship education relying on the theory of planned behavior. We were motivated to conduct this study because previous research did not successfully establish whether or not entrepreneurship education affects subsequent venturing activities. Using a quasi experimental design, our results indicated that entrepreneurship education increased attitudes and perceived behavioral control. Attitudes affect intentions and, thereby start-up behavior one year later. Thus, we conclude that. Ajzen’s (1991) theory of planned behavior appears to be a valid framework for predicting entrepreneurial behavior. There are several limitations to this research. To start with, the response rate at the third point of measurement is relatively small and not all data could be used for the longitudinal analysis. Although the sample size was acceptable, the results are less robust with a smaller number of respondents. Moreover, the analysis is only based on students, which all attend the same university. An effect of this could be biased responses because they possibly would like to give socially-desirable answers after having participated in an entrepreneurial teaching program. Due to that it is legitimate to question the generalizability of the measurement. Furthermore, by manipulating intentions for the second point of measurement, a possible bias in the respondents’ answers could exist. Despite the fact that the sample was somewhat selective because all targeted individuals received entrepreneurial training, this does not pose a problem because the analysis was also performed on a longitudinal basis. This balances out the effects of a possible bias.

The finding that would-be entrepreneurs are actually taking action within one year is remarkable. Most previous studies did either not address the link between intentions and behavior (e.g. Krueger et al., 2000) of found a non significant association between
intentions and behavior (Soitaris, et al., 2007). However, our study used a longer time lag because we assumed that the effect of intentions on behavior evolves over time. Using a larger time lag, our study indicate support to the assertion that entrepreneurship education affect entrepreneurial behavior. As Drucker (1985) years ago commented, entrepreneurship is something of a discipline, capable of being learned and being practiced effectively, and including the systematic actions and behavior of entrepreneurs: ‘Indeed, the events that explain why entrepreneurship becomes effective are probably not in themselves economic events. The causes are likely to lie in changes in values, perception, and attitude, changes perhaps in demographics, in institutions, perhaps changes in education as well (Drucker, 1985: 13).’

The effect of entrepreneurship education is mainly driven by attitudes. This means that entrepreneurship education needs to appeal to the emotion and passion of the entrepreneurial life course and subsequently increase the desire of students to perform venturing activities by themselves (Souitaris et al., 2007). For example, as experienced by the students investigating and learning from the career and best practices of entrepreneurs (as documented in the (auto)biography assignment), successful role models may inspire the new generation and increase the perception that enterprising is a rewarding activity. However, we did not find the expected effects of subjective norms and perceived behavioral control. These findings are not in line with Autio’s et al. (2001) research who found that perceived behavioral control has the strongest relationship with intentions. Possibly, individuals might not care about their friends’ and families’ opinions when it comes to behavior. Also, perceived behavioral control appears to be no predictor of behavior as mentioned earlier, which could be due to the fact that individuals do not base
their behavior on a self-assessment. Consequently, intentions are unable to mediate this non-existent association. Consequently, this part of Ajzen’s (1991) model is partially confirmed in its ability to reliably forecast entrepreneurial behavior, with especially attitude being the strongest predictor and to a certain extent subjective norms when attempting to forecast intentions and behavior.

Given our results, we believe that the antecedents of intentions relating to Ajzen’s (1991) theory of planned behavior have been validated sufficiently. However, attitudes and perceived behavioral control do not always predict intentions and, moreover, intentions do not always translated into behavior. Future research should focus on other sources of intentions and behavior. It is for example likely that moderators are present. For example, high opportunity costs may prevent some students high in perceived behavioral control to develop intentions to become an entrepreneur. The availability of resources and institutional forces may affect the relationship between intentions and entrepreneurial behavior. Thus, it is time to evaluate moderator factors that influence the entrepreneurial behavior. Another point to be considered for future research is that the internal relation between the three independent variables (attitude, subjective norm, perceived behavioral control) has not been empirically established. By doing so, one could possibly provide insights that help understand the journey of becoming an entrepreneur in more detail.
References


Entrepreneurial Integration of the Caribbean: A Comparative Study

Saidi Porta, MBA, PhD.c

The objective of this study is to research and compare the latest trends of the Entrepreneurial Climate on six Caribbean islands and analyze if Caribbean Entrepreneurial Integration could become a competitive advantage for entrepreneurs in the Caribbean Region. This research will be conducted using a Business Venture Approach and studied under two different views: from the perspective of economic theories on integration and from the perspective of entrepreneurship theories that explain how external environmental factors and culture impact the development of entrepreneurs. Results will contribute to expand the existing body knowledge in the development of opportunities and threats Caribbean entrepreneurs.
Toward the Scholarship of Teaching and Learning for Entrepreneurship (SoTLE)*

By Alex Bruton

The “learning perspective of entrepreneurship”, the “concept of entrepreneurial learning” and “models of how entrepreneurs learn” have received increasing attention in recent years because they are purported to provide a useful lens for studying entrepreneurial activity and the nature of entrepreneurship. This paper reports on initial work being carried out with the aim of advancing a theoretical framework that contributes to the conceptualization of scholarship in the entrepreneurial academy and provides a lens through which entrepreneurship scholars, curriculum designers, teachers and learners can view their work. Emerging theories of entrepreneurial learning are extended and complemented by concepts drawn from the fields of epistemology (theory of knowledge), the scholarship of teaching and learning (SoTL), entrepreneurial psychology, and entrepreneurship education. The overall result, a framework for the Scholarship of Teaching and Learning for Entrepreneurship (SoTLE), is advanced together with a detailed map of the SoTLE landscape in order to make clear the implications for educators, researchers and practitioners.

Introduction

Background

In his article debating the maturity and legitimacy of entrepreneurship education, Katz (2008) argues that in recent years there has been a convergence about what should be taught in a course in entrepreneurship or small business, that there has been a convergence in the

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Alex Bruton, ICSB 2010
corresponding pedagogies, and that a significant level of standardization has taken place in entrepreneurship education. We agree with this. Using the convergence and standardization argument as evidence, he then concludes that the need for new product design in entrepreneurship education is low. We respectfully and quite strongly disagree with this. Rather, the work reported in this article is motivated by calls to action such as those made by Solomon et al. (2002), who said that “for entrepreneurship education to embrace the 21st century, professors must … expand their pedagogies to include new and innovative approaches to the teaching of entrepreneurship,” by Kuratko (2004) who argued that entrepreneurship “should begin to move into a leadership role” within the business school, and by Vesper (1999) who went even further by asking “…what might be different if we had started first with a school of entrepreneurship and then added a few courses for a concentration or major in middle management?”

While we have not had occasion (nor is there a desire) to create a school of entrepreneurship at Mount Royal University, we have just come through the process of completely re-designing our entrepreneurship curriculum. Our core offering has been made-over from a four-year applied degree with a fairly traditional small business focus to a cross-campus minor that delivers a creativity, innovation and entrepreneurship-based learning experience in an integrated fashion by phase of the new venture life cycle, and the intention is to offer a major to business students based on an augmented version of the same curriculum. While we kept our 14-year old award-winning curriculum on hand throughout the renewal process for reference and as a source of tried and true topic-level teaching innovations, we were fortunate to have the freedom to approach it as a completely greenfield project. This meant we were free not only to create new topics within existing courses, but to design entirely new courses and the program structure from scratch. We asked ourselves: what would the ideal undergraduate university program look like?
In doing this, we went back to first principles on many occasions in the fields of entrepreneurial learning, epistemology (theory of knowledge), the scholarship of teaching and learning (SoTL), entrepreneurial psychology, and entrepreneurship education. We believe the resulting curriculum has moved us into a leadership position within our business school and, based on the response from our students and members of our regional entrepreneurial ecosystem, we suggest that there is a strong need and opportunity for product design in entrepreneurship education today. And perhaps as importantly, we feel that our return-to-fundamentals approach has given us the tools and a perspective that can contribute to our ongoing renewal and the broader conversations taking place about the future of entrepreneurship education.

**Aims and Method**

This paper provides an introduction to and quick tour of the theoretically-informed work we are carrying out with the aims of:

1. Advancing a theoretical framework for the *Scholarship of Teaching and Learning for Entrepreneurship (SoTLE)* that we propose contributes to the conceptualization of scholarship in the entrepreneurial academy today and provides a lens through which entrepreneurship and innovation scholars, curriculum designers, teachers and learners can view their work; and

2. Providing a detailed *map of the SoTLE landscape* that we suggest contains the essential elements required to shape the design and intention of new entrepreneurship and innovation curricula – at the activity, topic and or program levels, and highlights the various domains of scholarly inquiry important to the SoTLE today.
Overall, we hope that this work-in-progress receives constructive feedback, influences dialogue about the process and roles of teaching and learning for entrepreneurship and innovation, and provides guidance for educators, researchers and practitioners. As described in the body of the paper, our approach is to extend and complement emerging theories of entrepreneurial learning using theoretical concepts drawn from the fields of epistemology (theory of knowledge), entrepreneurial psychology, the scholarship of teaching and learning (SoTL), and entrepreneurship education.

**Background**

This section sets the stage for the work that follows by introducing the state of play in higher education, entrepreneurship education and entrepreneurial learning. We do not intend to provide a complete review of the literature in each case but, rather, we use recent literature to describe the essential motivations for and elements upon which the paper builds.

**Higher Education**

Calls are being made around the world for new approaches to education (Owen et al. 2006; Guntram 2007) on the premise that we are part of an information society characterized by: technology-savvy students who learn more by absorption and experience than by reading a training manual or attending a course (Brown 1999); a shift in the focus of creativity from generating original content to the timely rip-mix-burn reshaping of existing content (Ito 2007); increasing requirements for interdisciplinary work carried out by teams across functional and institutional boundaries (Guntram 2007); new ways of perceiving and organizing knowledge in society (Weinberger 2005) and in the educational sector (Cunningham and Duffy 2000); and new forms of teacher and learner interaction enabled by innovative technologies and approaches to copyright (Dillon and Bacon 2006). And it is frequently argued that Web 2.0 technologies are
causing a disruption in higher education much like those that took place or are taking place in the music, newspaper, book and television industries (Christensen, Johnson and Horn 2008; Tapscott and Williams 2010). In order to survive in the networked, global economy of the future, universities are being told to embrace collaborative learning and collaborative knowledge production (Tapscott and Williams 2010) and teachers are being encouraged to shift their practices from the traditional teacher-centered transfer of subject-area-focused knowledge to the development of resources and practices that teach students the skills required to learn, collaborate and build knowledge on their own (Owen et al. 2006; Guntram 2007).

**Entrepreneurship Education**

We have already mentioned that the field of entrepreneurship is debating its maturity and seeking its own legitimacy (Katz 2008) and trying to chart its path forward (Vesper 1999; Solomon et al. 2002; Kuratko 2004). Meanwhile, many researchers, such as Kuratko (2004), Alberti, Sciascia and Poli (2004) and Pittaway and Cope (2007), are seeking to better understand and advance the roles of entrepreneurship education. We suggest that there is no discipline in which the shifts described above are more relevant at this point in time than in entrepreneurship education. And, as the calls for change are being made, debate about and research into how to best teach entrepreneurship continue to be wide-reaching and extensive (Alberti, Sciascia and Poli 2004; Pittaway and Cope 2007). There are questions about whether the business school is the best place to teach entrepreneurship (Gibb 2002; Kirby 2004) and about the appropriateness of traditional approaches to learning how to conceive of and start successful new ventures. An example of the latter point is that despite the ubiquity of the business planning process in entrepreneurship education (Honig 2004) and typically high levels of excitement about its use as a teaching method (Roldan et al. 2005), little evidence exists that the business planning process
helps student entrepreneurs learn (Honig 2004) (even if it might have other benefits in a new venture setting as suggested by Delmar and Shane (2003) and others). We also note the recent push being made to better understand how to measure the outcomes of entrepreneurship education. See Fayolle, Gailly and Lassas-Clerc (2006), Morris (2010), DeNoble and Singh (2010) for examples.

**The Roles of Entrepreneurship Education and Research**

A lot has been said about how entrepreneurship drives economic growth and creates value in society (Brock and Evans 1989; Acs 1992; Carree and Thurik 2002), and about the role of entrepreneurship education in encouraging and fostering entrepreneurship and innovation (Solomon et al. 2002; Kuratko 2004; Alberti, Sciascia and Poli 2004). Alberti, Sciascia and Poli (2004) present the causal diagram shown in Figure 1 that illustrates the generally accepted causal relationship between entrepreneurship education, entrepreneurial activity and benefits to individuals, firms, economy and society. It also shows the mediating role that entrepreneurship research is understood to play in the relationship between entrepreneurship education and entrepreneurial activity.

![Figure 1: The Relationship between Entrepreneurship Education, Entrepreneurial Activity and Entrepreneurship Research (Alberti, Sciascia and Poli 2004)](image)

**Entrepreneurial Learning as a Lens for Studying Entrepreneurial Activity**

The *learning perspective of entrepreneurship*, the *concept of entrepreneurial learning* and *models of how entrepreneurs learn* have been receiving increasing attention in recent years.
because they are purported to provide a useful a lens for studying entrepreneurial activity and the nature of entrepreneurship (e.g. Cope 2005; Harrison and Leitch 2005; Holcomb et al. 2009). This is perspective in contrast to other dominant theoretical perspectives of entrepreneurship, including the so-called functional, personality, and behavioural perspectives reviewed in Cope (2005). Existing definitions of the concept of entrepreneurial learning tell us that it involves acquiring, assimilating and organizing newly formed knowledge (e.g. Gartner 1988; Minniti and Bygrave 2001; Cope 2005; Holcomb et al. 2009) in relation to existing stocks of knowledge, skills and experience (Reuber and Fischer 1999; Harvey and Evans 1995) in a process that is cumulative (Minniti and Bygrave 2001) and recursive (Alberti, Sciascia and Poli 2004; Holcomb et al. 2009), and which involves both experiential and vicarious modes of learning (Holcomb et al. 2009). We have found the learning perspective to be very useful in understanding and interpreting entrepreneurial activity in the context of our curriculum renewal work. As a starting point for this paper, we share to the Holcomb et al. (2009) architecture shown in Figure 2. As shown, this model presents experiential learning (through direct experience) and vicarious learning (through modeling others’ behaviours and actions) as two different learning contexts, and highlights the effects of heuristics within those contexts and across the learning process. This model and their definition of entrepreneurial learning implies a process by which people acquire, assimilate and organize new knowledge for the discovery and exploitation of opportunities.
**Results: Toward the Scholarship of Teaching and Learning for Entrepreneurship**

The results of our work are reported here in four steps that build on what we have just reviewed and on each other. The first result adds to the entrepreneurship literature a broader perspective on the concept of knowledge as it applies to entrepreneurial learning (by borrowing from the field of epistemology to consider explicitly the types of knowledge that can be gained and the ways in which knowledge comes about through the learning process). The second proposes a model for thinking about entrepreneurial learning and its outcomes from the perspective of the individual entrepreneur (by drawing from theories in entrepreneurial psychology and educational research). The third briefly introduces to the entrepreneurship literature the concept of the scholarship of teaching and learning (SoTL). And the fourth uses the SoTL concept together with the earlier contributions to advance a modified version of the Holcomb et al. (2009) architecture of entrepreneurial learning and, in turn, advance the notion of the SoTL for entrepreneurship (SoTLE).
The Knowledge Creation Metaphor and Types of Knowledge for Entrepreneurial Learning

Our review of the entrepreneurship literature (not reported here) seems to indicate that almost all previous treatments of entrepreneurial learning are based on a knowledge-acquisition metaphor of learning (or they are not explicit in how they might be based on something other than the acquisition metaphor). In other words, knowledge is assumed to be acquired or accumulated through the learning process. Given the nature of entrepreneurship and its importance in today’s knowledge-based economy and society, we propose that models of entrepreneurial learning should be extended to also view it as a process of participation in shared learning activities and, importantly, as a process of knowledge creation for innovation. The first contribution of this paper comes about by introducing to the entrepreneurship literature a multiple-metaphors approach to how the process of entrepreneurial learning is understood. The emerging epistemological approach in Figure 3 (Paavola and Hakkarainen 2005) presents three different ways in which knowledge comes about and can be understood within human learning and cognition, an important one of which for entrepreneurship is the so-called knowledge-creation metaphor. Through the knowledge-creation metaphor, learners are understood to learn by developing collaborative shared objects and artifacts, and the learning process can be examined in terms of creating social structures and collaborative processes that support knowledge advancement and innovation (Paavola and Hakkarainen 2005). As we will discuss later, it is important to be aware of which metaphor(s) of learning apply when considering an entrepreneurial learning context and to be deliberate about them when designing entrepreneurship curricula.
Next we consider the different kinds of knowledge that can result from a learning process, as described by Biggs (2003). These are shown in Figure 4 and include declarative knowledge (learning about something), procedural knowledge (the skills and steps for how to do something), conditional knowledge (learning when, where and why to apply the previous categories of knowledge) and functioning knowledge (the ready-to-apply knowledge gained through experience).

![Diagram of relationships between different kinds of knowledge](image_url)

**Figure 4: Relationships between the Different Kinds of Knowledge (after Biggs 2003)**
Earlier, in the context of Figure 1, we referred to the role that entrepreneurship education is often understood to have in creating value in our economy and society: education should generate more and better entrepreneurs (Ronstadt 1985) and this should increase the chances of entrepreneurial success (Kirby 2004). However, as Alberti, Sciascia and Poli (2004) and others point out (McMullen, Chrisman and Vesper 2001; Storey 1994), very few studies have actually proven that these commonly held beliefs hold true. And we are not aware of any work done yet to formally establish the impact of the broader entrepreneurial learning construct (as distinct from formal entrepreneurship education) on these outcomes. In order to understand why such evidence may not exist and to provide insight into our own entrepreneurship curriculum renewal process, we drew from the field of entrepreneurial psychology to develop what we call a 10-Arrow Model of the Individual’s Entrepreneurial Learning Context in Figure 5. Directly analogous to the model developed in Rosenthal (1981) and described in Rosenthal (1994), the intention of the 10-Arrow Model is to provide clarity for the study of a mediating variable. In our case the mediating variable of interest is entrepreneurial learning (although we also wish to clarify the role of formal entrepreneurship education). In a way exactly analogous to the work of Rosenthal (1981), we posit that 10 links exist between five groups of variables: A) distal independent variables that represent the stable attributes of the entrepreneur, including his or her educational background; B) proximal independent variables that represent his or her situationally and domain-specific attributes; C) mediating variables, including entrepreneurial learning and many person and nonperson variables; D) proximal dependent outcomes, including proximal learning outcomes; and E) distal outcomes, including distal learning outcomes. In postulating this model we considered a spectrum of the literature on predictors, determinants and outcomes of entrepreneurial success, including for example Robinson et al. (1991), Baum and Locke.
(2004), Baum et al. (2007), Mitchell et al. (2007), and Ahmad and Hoffman (2008). Recognizing that this model has not yet been validated, we propose that it is useful for several reasons:

1. It appears to more completely represent the relationship between entrepreneurial activity, entrepreneurship education, and entrepreneurial learning than does Figure 1;

2. It makes a clearer case than Figure 1 for why it is so difficult to establish and quantify the role of entrepreneurial learning (it is only one of many mediating variables in a complex system of relationships between many independent and dependent variables) – designing an experiment to isolate just the mediating effect of entrepreneurial learning is difficult;

3. It underscores that there is a difference between proximal and distal outcomes, and between learning outcomes and other types of outcomes for entrepreneurial success, as discussed in Noel and Latham (2006);

4. It shows that, nominally, the learner’s formal education is a distal independent variable to entrepreneurial success;

5. As described in Rosenthal (1994), the 10 arrows represent the types of relationships that can be examined in research about the mediating variable – of most interest to the curriculum designer might be the B-C and C-D relationships, that is the inputs and outputs closest in time to the learning process; and

6. It puts the spotlight on the relationship between entrepreneurial learning, proximal learning outcomes and distal outcomes, as discussed next.
Figure 5: A 10-Arrow Model of the Individual’s Entrepreneurial Learning Context

In the context of our renewal project, the last point above gave rise to the causal relationship shown in Figure 6 which is intended to represent the domain of the entrepreneurship teacher and curriculum designer. It includes the teaching process and shows its relationship to entrepreneurial learning and to the corresponding proximal learning outcomes. Comparing Figure 6 to the fuller context of Figure 5, we found it somewhat daunting that as teachers the only control we have is over the teaching inputs and we can typically only measure the teaching outcomes and the proximal learning outcomes. We do not control any of the other dependent variables shown in A and B in Figure 5, and we have to make considerable efforts to measure the
other independent variables shown in D and E, if they can be measured at all. On the other hand, we were encouraged by the discourse taking place in the literature on the importance of the learning perspective of entrepreneurship and by the important role the learning outcomes play among the other types of outcomes (Noel and Latham 2006). Together, the 10-Arrow Model of the Individual’s Entrepreneurial Learning Context in Figure 5 and the teaching and learning relationship in Figure 6 constitute the third contribution of this paper.

![Diagram of the 10-Arrow Model](image)

**Figure 6: Relationships in the Teacher’s Domain**

**The Scholarship of Teaching and Learning**

While we feel that the 10-Arrow Model of the Individual’s Entrepreneurial Learning Context in Figure 5 represents the relationship between entrepreneurial learning, education and activity more realistically than Figure 1, Figure 5 does not define the relationship of these constructs with entrepreneurship research. Doing this is the fourth contribution of this paper. Based on the seminal work of Boyer (1990) and interpreted here for entrepreneurship in much the same way as Atkinson (2001) interpreted it for sociology (see Figure 7 for example), we bring into the spotlight a concept known as the scholarship of teaching and learning (SoTL).

In his well known report entitled *Scholarship Reconsidered: Priorities of the Professoriate*, Boyer (1990) introduced the notion of four conceptualizations of scholarship: discovery,
application, integration and teaching. The scholarship of discovery is what we usually think of when we talk about research and reflects the excitement of a new idea, the exhilaration of a new insight, and the search for knowledge for the joy of knowing (Boyer 1990). The scholarship of integration is work that compiles, interprets and can generate new insights from original research and offers an analytical and integrating perspective on other work (Boyer 1990). The scholarship of application is applied research that is also “engaged” through a dynamic process through which theory and practice interact, and it implies applying what we know in a process that leads to discovering new knowledge and contributing to our existing knowledge base (Boyer 1990). And as Atkinson (2001) proposes, we choose to view the scholarship of teaching and learning as the application of the other scholarships to the discipline of entrepreneurship. Discussion of the four domains is not without precedent in entrepreneurship. For example, Ireland (2009) presented Boyer’s four concepts of scholarship as being relevant to research in business. He also suggested that the Academy of Management’s four pillar publications fit the framework as follows: The Academy of Management Journal publishes scholarly work in the discovery category, The Academy of Management Review publishes work in the integration category, The Academy of Management Perspectives publishes work in the application category, and The Academy of Management Learning and Education publishes work in the scholarship of teaching category.
It is our intention to present the SoTL as an invitation to entrepreneurship educators to revisit their perspectives on teaching and research, and as an opportunity for the broader re-conceptualization of scholarship within the entrepreneurial academy. Specifically, for example, SoTL has the following characteristics:

- **On the domain of our work as scholars:** The SoTL practitioner is at once a scholar of his or her own discipline and a scholar of learning and teaching within that discipline (O’Brien 2008);
- **On the focus of our work:** “Basic to understanding of the scholarship of teaching is that the focus is always on the student – not the professor, not even the discipline…. The professor … is [only] the vehicle to student understanding.” (Atkinson 2001);
- **On the goal of our work:** “The ‘northern star’ of SoTL inquiry is the enablement of learning. This should not be seen as a narrow prescription, but rather an overarching intention that guides thinking and practice.” (O’Brien 2008); and

![Figure 7: Domains of Scholarship](image-url)
• *On the teaching-research tension:* Rather than let teaching and research compete for our attention, a SoTL perspective brings into view the close and mutually informative nature of the teaching-research relationship (Barnett 2005).

**A Framework for the Scholarship of Teaching and Learning for Entrepreneurship**

At this point, we have all the tools in place to propose the framework for the Scholarship of Teaching and Learning for Entrepreneurship (SoTLE). To do this we modify the Holcomb et al. (2009) architecture of entrepreneurial learning (Figure 2) by incorporating the results presented so far in this paper. As others have argued for the importance of applying learning and knowledge concepts to entrepreneurship (Harrison and Leitch 2005), we are encouraging adoption of an entrepreneurial learning perspective together with a multiple metaphors approach to learning (knowledge acquisition, knowledge participation and or knowledge creation), separation of outcomes along the proximal-distal continuum, and, where appropriate, a shift away from the research vs. scholarly teaching tension in favour of the scholarship of teaching and learning. The result is shown in Figure 8.

Specifically, we have borrowed from the Holcomb et al. (2009) model the treatment of experiential learning and vicarious learning as two different entrepreneurial learning contexts, and we continue to highlight the effects of heuristics across the learning process. To their concept of entrepreneurial learning as the acquisition, assimilation and organization of new knowledge, we suggest addition of a multiple metaphors viewpoint, thereby suggesting that entrepreneurial learning be seen as a process made up (differently in every instance) by some combination of *acquiring* new knowledge, *participating* in shared learning activities and, importantly, collaboratively *creating* mediating conceptual artifacts, for conscious knowledge advancement, discovery and innovation. Assimilation of that knowledge using heuristics and its
organization through linking to pre-existing structures are still assumed to occur as described in Holcomb et al. (2009). We have also added to the model the relationship between scholarly teaching and the learning processes (as discussed in the context of Figure 6) and the notion of articulating outcomes of the learning process along a proximal-distal continuum (as discussed in the context of Figure 5 and Figure 6). Importantly, we also suggest that the scholarship of teaching and learning (as discussed in the last section) has a place in the learner’s environmental context such that it mediates the relationship between outcomes of the process and scholarly teaching. In the next section will discuss the nature of the role of the entrepreneurial scholar given this relationship.

We propose that the framework for the SoTLE in Figure 8 provides an alternative to Figure 1 for how entrepreneurial scholars, teachers and curriculum designers view their work and roles within the entrepreneurial process. And we close this section by offering the following definition of the SoTLE: a rigorous inquiry-driven lens through which students, experienced entrepreneurs and scholars work together to understand, improve and enable learning for entrepreneurship so that our students – whether they are young or old, nascent or experienced – are best equipped to innovate in today's economy and society.

**Discussion and Implications**

It is one thing to talk about a shift in thinking, as we have done above, and it is another to understand what it means and how to act on it. In this section we try to bridge this gap by sharing an understanding of the SoTL and by introducing a map of the SoTLE landscape that is intended as a guide to the implications for scholars, teachers and curriculum developers.
Understanding the SoTL: The Teaching Hospital Analogy

Lee Shulman is Past-President of the Carnegie Foundation for the Advancement of Teaching, a pioneering institution in the SoTL field. In an article called “Inventing the Future” (Shulman 2000), he drew analogy between the SoTL concept and the work he saw being carried out in teaching hospitals. We share it briefly here in order to impart insight into how the SoTLE can be perceived as different from teaching, research on entrepreneurship education and research on entrepreneurship. Shulman’s analogy was based on his observation that medical faculty members not only engaged in scholarly healing in their day-to-day work, but also contributed...
wherever they could to what he called a scholarship of healing, for example, by reading the literature voraciously as needed to help their patients, carefully documenting their patients’ diagnoses and treatment plans, conducting clinical research and sharing the results for peer review and feedback. In his observation, they did not seek to publish as a first priority or as much as was possible; rather, Shulman spoke of the “moral and pragmatic responsibility” medical faculty had to “monitoring their clinical work and doing whatever could be done to improve its impact.”

It is our vision that rather than just being teachers informed by the entrepreneurship-related scholarship we do (even if that scholarship is focused in the area traditionally referred to as entrepreneurship education), we need to move deliberately to become a more integral part of our regional entrepreneurial ecosystems. At the 2009 Experiential Classroom X in Tulsa Oklahoma – seen by many to be one of the gatherings of leading entrepreneurship teachers worldwide – it was said by one of the pioneers of entrepreneurship education research quoted earlier in this paper that an overwhelming majority of the literature in the field of entrepreneurship is not even read by practicing entrepreneurs. Especially if this is true, then entrepreneurship scholars should aspire to their version of a teaching hospital. This would mean being engaged not only in the processes of scholarly teaching and entrepreneurial learning in our own day-to-day work, but also contributing wherever we can to a scholarship of teaching and learning for entrepreneurship in order to improve the impact of entrepreneurial learning for individual practicing entrepreneurs. It is likely that most of us would agree to the important role of teaching hospitals both for enabling the life-long learning of residents and doctors, and for keeping the scholarship that takes place extremely focused on healing patients. In the same way, teachers of entrepreneurship would benefit from this sort of on the ground experience and we propose that
our scholarship would benefit being focused on doing whatever can be done to improve entrepreneurial learning. Another way to put all of this is that, like medical faculty, we need to make sure we are an indispensible mediating variable among all of those listed in part C of Figure 5.

Before moving on, we wish to be clear that we do not mean to suggest that today’s entrepreneurship faculty seek only to publish as much as possible, that they do not already do some of these things, or that their research is not relevant to individuals, firms, economies or society; despite the comment referred to above, we have no data-driven evidence that supports these kinds of conclusions. Rather, we seek to bring forward the SoTL concept at a time when, as we have already said, the field of entrepreneurship is debating and seeking its own legitimacy and path forward, and when it is being suggested that there is little need for product design in entrepreneurship education. It is our hope that this adds to the conversation by sharing a perspective and encouraging entrepreneurship faculty to serve entrepreneurial learners first and foremost by enabling their learning experience, just as medical faculty serve their patients first by enabling their healing. And then by contributing wherever possible to a collective scholarship of teaching and learning for entrepreneurship based on what takes place in our classrooms and at their interface with our communities and regional ecosystems.

**A Map of the SoTLE Landscape**

Gale (2008) tells us that SoTL inquiries primarily seek “to understand and improve student learning in specific curricular contexts.” Because this speaks to the importance of getting the curricular context right and because designing the curriculum is where the rubber hits the road for entrepreneurship scholars, the final contribution of this paper is the map of the SoTLE landscape shown in Figure 9. The notion of such a map for orienting those new to the SoTL is
borrowed from O’Brien (2008), and parts of the structure were presented in Alberti, Sciascia and Poli (2004) as outstanding issues in entrepreneurship education. We have combined the work of those authors and added to it the elements required for undertaking SoTL activities in an entrepreneurial context. As such, Figure 9 contains the essential elements that shape the design and intention of an entrepreneurial curriculum, and highlights the domains of research and scholarly inquiry important to the SoTLE today. It can also be used as a general tool for analyzing, designing or describing curricula at the program, course and topic levels.

In the following we share selected implications for curriculum design, and teaching and learning. We do not describe every section of the map in detail. Rather, we use it to highlight selected implications of the SoTLE concept for the scholar, curriculum designer, teacher and learner that we have found to be most important throughout our own renewal process to date. More detailed examples can be found of its application at the course level in Bruton (2010) and its application at the program level in Bruton, Kenny and Jensen (2010).

The Learning Objectives Need to be Right, Right Up Front. The question of defining the desired learning outcomes is shown in the map in Figure 9c. In the context of Figure 5 and Figure 6 we discussed the important notion of a proximal-distal continuum of outcomes and the relationship between teaching, entrepreneurial learning, proximal learning outcomes and distal outcomes. We think of proximal outcomes as those that the teacher and learner have some direct control over and ability to measure, such as measures of student performance, measures of student learning and measures of program performance. And we think of distal outcomes as being more difficult to control and measure because they are typically so distant in time and only partially controllable through the intermediary of the proximal variables. It is important that the learning objectives (desired outcomes) be identified, articulated and agreed-upon early, and
revised often throughout the design process. For us this usually means first looking at Figure 5 and deciding which of the proximal outcomes we would target; that is, which of the C-D relationships we would focus on. This includes trying to identify which proximal outcomes mediated the distal outcomes we thought were most important. Otherwise we rarely put more than a little effort into directly targeting the distal outcomes.

Figure 9: Map of the SoTLE Landscape (adapted from O’Brien 2008 and Alberti et al. 2004)
What Will Be Learned is Not Just About Content. The question of what will be learned is shown in the map in Figure 9d. As discussed in O’Brien (2008), it is important that one’s answer to this is not just limited to defining content, and we suggest that it is better if content is defined last in favour of first considering the core constructs at hand, the fundamental elements being imparted and the types of knowledge to be gained by to the students.

Examples of core constructs include the strategic entrepreneurship construct defined by Ireland, Hitt and Sirmon (2003), the entrepreneurial business model framework in Morris, Schindehutte and Allen (2005), the definition of value innovation in Chan and Mauborgne (2005), the network construct reviewed in O’Donnell et al. (2001) and the entrepreneurial orientation construct clarified in Lumpkin and Dess (1996). There are many other examples, some of which have been well validated and others which have been proposed based on theory and await validation. (In fact, many of the variables in Figure 5 are common entrepreneurial constructs in their own right.) For any curricular context, there is almost always at least one underlying construct that defines the context and parameters of the learning, and the implication of a SoTLE approach to curriculum design is that the construct(s) should be defined and articulated as soon as possible in the process. Of course teachers should clearly understand these, and we have found success in also making them transparent to our students.

Fundamental elements is a term used to refer to the three broad ways of answering the “what will be learned?” question proposed by O’Brien (2008). Speaking first about ways of thinking and practice, she points out that it is generally accepted “across the academy that knowledge is itself a construction of particular social and cultural communities (Berger and Luckmann 1967) and that all such communities orient to the specific and shared aims, activities and ways of achieving them that comprise and make distinctive that community (Wenger 1998).” The
community of entrepreneurs that our students join before and after graduation is most certainly no exception to this. The implication is that one should try to articulate and build into the curriculum the relevant ways of thinking and practice common to successful entrepreneurs. Examples might include: thinking about challenges as opportunities to create value; seeing oneself as an agent of change; accepting and even yearning for criticism; tolerating ambiguity; and being open to taking risk. Next, according to O’Brien (2008), threshold concepts are concepts that: represent fundamental ways of thinking and knowledge within the field; are transformative, in that learning about them changes the way students think about the phenomena or area of application; and once understood open up a deeper level of thinking that in turn affords access to other important concepts within the field. Examples of threshold concepts in entrepreneurial learning might include: that a group is different from a team; that having “skin in the game” is usually a condition for greater success; that bootstrapping is an option; and that in the eyes of an investor one’s experience and passion can be more valuable than one’s venture idea. Also according to O’Brien (2008), troublesome knowledge is a kind of transformative knowledge that “brings into view aspects of troublesomeness that are less about difficult concepts and more to do with the challenges inherent within a change to one’s inner landscape, perspective and worldview (O’Brien 2008; Perkins 2006).” In entrepreneurial learning, threshold concepts and troublesome knowledge seem to have been addressed in the context of learning from ‘critical events’ that cause one to question previously taken-for-granted beliefs and assumptions (Deakins and Freel 1998; Cope and Watts 2000; Cope 2003), and to reframe one’s understanding to create a shift in mindset (Applebaum and Goransson 1997). Occasions where students might gain troublesome knowledge include: the breakup of an entrepreneurial team; seeing a good idea receive support because it was pitched more convincingly than a great idea;
recognizing and being tempted by the perceived gains that would come from misrepresenting their work; and receiving conflicting advice from two equally accomplished and well-respected entrepreneurs. Because of its importance, the implication for a SoTLE initiative is that room be made for this type of learning in at least two ways. First is through the nature of the curriculum design itself. Second, as Cope (2003) suggests, is through building opportunities for critical self-reflection into the learning process in order to encourage this sort of higher level of learning and capture it when it occurs. This implies making it transparent to the teacher and the learner.

We discussed the types of knowledge in detail in the context of Figure 4 and will not say much more here other than to suggest that it helps in the design process to recognize the highest level of knowledge required by your learning objectives, constructs and fundamental elements. As we will describe shortly, the types of knowledge need to align with the rest of the design.

Finally, because teachers are often quick to jump to content definition, we reiterate that the SoTLE approach requires leaving content definition until after the constructs, fundamental elements and types of knowledge have been addressed. One way to think about answering the “What will be learned?” question is that of deciding which of the B-C relationships in Figure 5 will be learned, and which of the other mediating variables in C will be targeted. Clearly, it is guesswork to select content without having made those decisions first.

Constructive Alignment is Critical. As described in Biggs (2003), constructive alignment means that the learning activities, the assessment methods, and the learning objectives in your curricular design are all consistent with and supportive of each other. Constructive alignment is often a challenge in entrepreneurship education where it is not at all unheard of to find complete misalignment. For example: a teacher might be found lecturing on business planning (the learning activity) and requiring the students to deliver a business plan (to be assessed), all with
the hope that the students will be able to start their own businesses (the actual learning objective). In our experience, the type of authentic curricular design required for a SoTLE approach implies the need for a broader concept of constructive alignment between the shaded elements of the map. In other words, what will be learned (Figure 9d) needs to align with how you choose to enable the learning (Figure 9e), with your desired outcomes (Figure 9c), and with how you plan to assess (Figure 9f). See our work on the Venture Design Studio (Bruton 2010) for an in-depth example of this kind of broad alignment in a non-traditional design.

As a brief example of the importance of constructive alignment between the elements in Figure 9d and Figure 9e, we have found that curricular designs based on the knowledge creation metaphor for how entrepreneurs learn (recall the metaphors of learning in Figure 3) seem better suited for meeting their requirements for gaining conditional knowledge (recall Figure 4) and especially functioning knowledge (the ready-to-apply knowledge gained through experience). Similarly, it is not surprising that designs based on a knowledge acquisition and participation metaphors seem better suited for gaining declarative knowledge (learning about something) and procedural knowledge (the skills and steps for how to do something).

**Summary and Concluding Thoughts**

We have introduced a framework for the Scholarship of Teaching and Learning for Entrepreneurship (SoTLE) that extends existing models of entrepreneurial learning with the aim of contributing to the conceptualization of scholarship in the entrepreneurial academy and providing a new lens through which entrepreneurship scholars, curriculum designers, teachers and learners can view their work. We propose that this perspective can help entrepreneurship programs lead the way at their universities in embracing collaborative learning and collaborative knowledge production, and help entrepreneurship scholars shift their practices even further away.
from the traditional teacher-centered transfer of subject-area-focused knowledge toward the development of resources and practices that teach students the skills required to learn, collaborate and build knowledge on their own.

We have also provided a detailed map of the SoTLE landscape that contains the essential elements required to shape the design and intention of new entrepreneurship and innovation curricula, and highlights the various domains of scholarly inquiry important to the SoTLE today. Based on our experience renewing our curriculum to date, we propose that this is an attractive way to approach the design and ongoing improvement of curricula that aim to provide students with authentic entrepreneurial learning experiences and the opportunity to reach into and catalyze innovation within their local ecosystems.

Finally, we close by acknowledging that the research described here necessarily favours breadth over depth in order to get across all of the main concepts. We look forward to future work, the plans for which include: documenting our reviews of the literature referred to herein; elaborating on the 10-Arrow Model shown in Figure 5; refining and further describing the SoTLE framework shown in Figure 8; using this perspective to contribute to ongoing discussions in the field about how to assess the outcomes of entrepreneurship programs; and articulating the various domains of research and scholarly activity that follow from this work.

References


*Alex Bruton, ICSB 2010*
**ABSTRACT**

The reduction of unemployment is a major challenge for many economies across the world. As youth graduate from tertiary school or even higher education, the opportunity for work is limited. One solution towards this struggle is to increase employment through entrepreneurial activities where individuals create their own opportunity. The Know About Business curriculum was developed by the International Labour Organization to meet the demands of individuals in developing economies who are seeking employment alternatives. A second initiative is focused on social entrepreneurship, marrying entrepreneurship and serving the public good. Five different entrepreneurship curriculums will be covered in the workshop.
While Regional Innovation Networks (RINs) claim to bring innovation to market by helping their tenants experience high growth, great products die before their age just because they fail to capitalize the market and customer potential. In line with recent entrepreneurship research on networks (Slotte-Kock and Coviello, 2009; Hoang and Antoncic, 2003) focusing on the processes associated with network development, this study explore the relationship between RIN policies and their tenant performances, tracking how far companies benefit from their RIN in setting their own network over time. Our preliminary results suggest the existence of inflexion points in the process of developing networks. Failure to recognize them and to manage them efficiently may threaten the growth of startups. The contributions of this paper are relevant to the enhanced understanding of network development, and provide insights to entrepreneurs and network providers on how to maximize their relationship and to take advantage on them.

**Keywords:** Regional Innovation Network - Network Process - New Venture
THE NEW GAZELLES:
AN EXPLORATORY STUDY OF HIGH-GROWTH ASIAN AMERICAN IMMIGRANT ENTREPRENEURS

Abstract of Doctoral Dissertation Presented for the 2010 ICSB World Conference
Category: Doctoral Consortium

May 30, 2010
Study on High-Growth Asian American Entrepreneurs

Background and Literature Review

Several scholars have emphasized the importance of entrepreneurs who established fast-growing firms, often referred to as high-growth entrepreneurs, for their contributions to job creation (Acs, Parsons, & Tracy, 2008; Birch, Haggardy & Parsons, 1995; Davidsson & Delmar, 2006; Delmar, Davidsson, & Gartner, 2003). Within the population of entrepreneurs in the U.S., there is mounting evidence of the important role played in economic growth and job creation by two sub-groups: (a) high-growth or high-impact companies (Acs et al., 2008), in particular, firms that are new and smaller, called “gazelles” by David Birch (1987); and (b) skilled immigrant entrepreneurs, in particular, Asian Americans in the high-tech industries (Hart, Acs, & Tracy, 2009; Wadhwa, Saxenian, Rissing, & Gereffi, 2007).

In the United States, Asian American immigrant entrepreneurs have emerged as one of the most successful group of entrepreneurs in terms of new venture creation, particularly in the high-tech industries (Hart et al., 2009). A report prepared by U.S. Small Business Administration on the small-business economy found that minority entrepreneurship continues to be an important part of the American economy, with Asians having the highest self-employment rates and highest rate of business ownership among all minority groups (Fairlie, 2008). According to Hart et al. (2009), “U.S. policymakers are focused as never before on the linkage between foreign-born talent and high-tech entrepreneurship” (p. 14). From an academic as well as from a policy perspective, there is need for a closer study of the cognitions, behaviors, and cultural factors that influence success among Asian American immigrant entrepreneurs.
Studies have reported that entrepreneurial cognition and behavior plays a key role in how opportunities are seen, perceived and acted upon. Broad agreement exists among entrepreneurial researchers that that seeing and acting upon opportunities is at the heart of entrepreneurship (Kirzner, 1973; Palich & Bagby, 1995; Stevenson & Gumpert, 1985; Stevenson & Jarillo, 1990). The fundamental premise of the proposed study is that since the seeing of and acting upon opportunity are fundamental to entrepreneurship, then understanding how special populations of successful entrepreneurs learn to see opportunities and take action to pursue them in the context of their culture may lead to a richer understanding of high-growth entrepreneurship.

Statement of the Problem

A review of the literature indicated a well-documented general problem in the field of entrepreneurship, which is that almost 50% of new businesses fail within 5 years (Shane, 2008) and among firms that survive, a relatively small number of entrepreneurial businesses achieve significant growth (Stangler, 2010). Given that high-growth firms started by immigrant entrepreneurs are important for economic growth and account for a disproportionate share of new employment in the United States (Reynolds & Curtin, 2007), it is important to understand the factors that drive their success.

The specific problem identified in the proposed study is that while there has been a growing recognition of the economic contributions of immigrant entrepreneurs, the theoretical framework to study immigrant entrepreneurship is inadequate (Sequeira & Rasheed, 2006). Despite the extraordinary success achieved by Asian American immigrant entrepreneurs in the high-tech industries (Hart et al., 2009; Saxenian, 1999,
2006), the cognitive and behavioral factors that undergird their success remain largely unexplored.

Statement of Purpose

The primary purpose of the proposed qualitative study with a multiple-case study design will be to investigate the entrepreneurial cognitions and behaviors involved in the seeing of and acting upon opportunity among Asian American immigrant entrepreneurs who have established high-growth business in the high-tech industries. The objective of the research is to gain an in-depth understanding of the cognitive, behavioral and cultural drivers that create unusual levels of success among Asian American immigrant entrepreneurs in the high-tech industries. To help relate the data collected with current literature, the proposed study will involve any exploration into how successful Asian American immigrant entrepreneurs experience, enact, and elucidate some of the existing theories and constructs that involve seeing and acting upon opportunities. The specific population for the proposed study will be Asian American immigrant entrepreneurs of Asian Indian ethnicity, who are key founders of high-growth firms in the high-tech industries and located in the East Coast of the United States.

Research Questions

The research questions posed in the proposed study are designed to guide the exploration of the patterns of thinking and action among Asian American immigrant entrepreneurs who are key founders of high-growth new ventures in the high-tech industry. The three research questions (RQ’s) are framed as follows:
RQ1. What are the cognitive processes used by high-growth Asian American immigrant entrepreneurs to see and act upon opportunities that lead to successful new venture outcomes?

RQ2. What are the behaviors reported by high-growth Asian American immigrant entrepreneurs to see and act upon opportunities that lead to successful new venture outcomes?

RQ3. How does the cultural context influence the cognitions and behaviors involved with the seeing of and acting upon opportunity among high-growth Asian American immigrant entrepreneurs?

Overview of Research Method and Design

The proposed study is a qualitative exploration of how Asian immigrant entrepreneurs who have established high-growth ventures in the high-technology (high-tech) industries experience and enact entrepreneurial cognition and behavior involved with the seeing of and acting upon opportunities. With the use of a multiple-case study research design that is holistic and takes into account the cultural context of the entrepreneur, the proposed study responds to the call by researchers that the domain of entrepreneurship must focus on high-growth entrepreneurs by the use of in-depth, descriptive, and theory building approaches (Bygrave, 2007; Davidsson, 2003). Data will be collected from multiple sources, in accordance with the strategy of triangulation of sources suggested by several scholars (Yin, 2009; Hancock & Algozzine, 2006). Three primary strategies will be used for the data collection: (a) a literature review of pertinent readings in the area of entrepreneurship, (b) semistructured interviews of the entrepreneur and a key-informant, and (c) data from other sources such as company documents and
archival records. The researcher then analyzes the data collected for themes and patterns and seeks to interpret the meaning of the information, using an iterative process that involves reviewing existing literature, seeking the opinion of experts, seeking clarification from the sources, and personal reflections of the researcher with the objective of understanding and gaining insights into the complex social phenomena.

To obtain answers to the research questions, the unit of analysis will be Asian American immigrant entrepreneurs. To help improve rigor, reduce misrepresentation, and enhance validity the proposed study will use various quality strategies suggested by case study experts, including, (a) thorough review of literature, (b) careful screening and selection of cases to ensure that the proper cases are identified prior to data collection, (c) use of a pilot study to refine data collection plans and procedures, (d) use of case study protocol to ensure the uniform procedures are used for all cases, (e) triangulation of data sources, (f) review of draft reports by participants, and (g) developing a case study database (Creswell, 2005; Hancock & Algozzine, 2006; Makela & Turcan, 2007; Yin, 2009). As with most qualitative approaches, the proposed study will emphasize the meaning that individual participants give to situations and also acknowledge the important role and personal experiences of the researcher (Yin, 2009).

Findings

The proposal has been approved and data collection has started from May 25, 2010. The preliminary findings will be presented at the ICSB conference in June 2010.

Significance and Implications

The results of this study could help guide policy makers and researchers (Merriam, 1998), and others who seek to understand the phenomenon of successful
entrepreneurship among immigrant entrepreneurs, a group that recent studies report is increasingly important to the creation of new jobs and the growth of the economy. By exploring the patterns of entrepreneurial cognition and behavior as well as the cultural factors involved with the seeing of and acting upon opportunities among successful Asian American immigrant entrepreneurs, this study could provide useful insights to prospective and nascent entrepreneurs who seek to model the thought and action patterns of successful entrepreneurs.

Finally, the most recent global economic crisis during 2007-2009 presents an unique opportunity to study the cognitions and behaviors of successful Asian American immigrant entrepreneurs during a period of recessions marked by resource constraints and high economic uncertainty. This is significant from a policy perspective as according the 2008 Global Entrepreneurship Monitor report “entrepreneurship is thought to be one of the mechanisms that helps turn around recessions by reallocating resources in such a way that promising new activities replace obsolete economic activities”.

In summary, the results of this study could provide insights and information into entrepreneurial cognitions and behaviors used by successful entrepreneurs that could prove useful for researchers, educators, policy makers, financial institutions, business leaders, sociologists, economists and to nascent entrepreneurs.

Estimated Time Frame for Completion of Study:

Data Collection: May-June 2010

Data Analysis and Recommendations: June- July 2010

Oral Defense: August 2010
Neuroentrepreneurship: What Can Entrepreneurship Scholars & Educators (& Practitioners) Learn from Neuroscience?

Norris Krueger, Jr., PhD

Abstract

We offer an overview of neuroentrepreneurship's potential to provide mechanisms for advancing entrepreneurship research and practice. More important, a recurring theme will be that neuroscience offers us a powerful alternate research sensibility that gives us some new key assumptions about the genesis of entrepreneurial decision making. We use some well-chronicled shortcomings and challenges in existing entrepreneurship research to profitably discuss how the application of neuroscience methodology can address these limitations and help extend entrepreneurship theory. We provide practical suggestions of a best practice application of neuroscience in entrepreneurship and identify research questions especially well suited for this methodology.

Introduction

A recent study at Cambridge (Lawrence et al. 2008) compared serial entrepreneurs to top managers and found that successful entrepreneurs and managers shared great ability at rational analysis ("cold" cognition). However, entrepreneurs demonstrated a significant edge in analyses that engaged both rational and emotional thinking ("hot" cognition). Perhaps unsurprisingly, 'hot' and 'cold' cognition tend to occur in different areas of the brain's front lobes.

This is but one striking study that suggests a fruitful research agenda for applying theory and methods from neuroscience to a deeper, richer understanding of entrepreneurs and the processes that lie beneath entrepreneurial cognition. We propose here to present (a) a concise overview of the key issues where neuroscience can play a useful role and (b) present

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2 The author wishes to thank many colleagues including the participants of the Max Planck Institute Summer School and of the European Summer University, (Bodo, Norway) but especially the leadership in neuro-entrepreneurship of Professors Isabell Welpe (Technical University of Munich) and Angela Stanton (Chapman University) and Mellani Day (Colorado Christian University) plus the anonymous ICSB reviewers.
experimental evidence that examines interesting differences between economic entrepreneurs and social entrepreneurs.

Zald (2007) claimed that entrepreneurs differed from the general population in the numbers and density of dopamine receptors in their cerebral cortex. His claim centered on multiple experiments that demonstrated subjects who consistently took more risk also had significantly higher numbers of dopamine receptors. (Dopamine is a hormone released as essentially a reward, in this case for successfully accepting risk.) However, this research has not compared entrepreneurs to non-entrepreneurs, nor social entrepreneurs. Moreover, we have not looked at temporal changes: Does being an entrepreneur change one's dopamine receptors? We now know to ask such questions…and we have the tools to answer them.

We know that entrepreneurs engage in considerable (and complex) cognitive appraisal of opportunities (Welpe and various colleagues) but very recent experimental data (Krueger, Grichnik & Welpe 2009) suggests that when nascent entrepreneurs appraise separately the economic and social dimensions of their proposed venture, only appraisal of the social dimension engaged the subjects' 'hot' cognition. This suggests that social entrepreneurs, stereotyped as unusually passionate even for entrepreneurs, should be a fruitful vehicle for extending studies such as those described.

There is growing consensus in the literature that the central nervous system reacts differentially to risk. Functional magnetic resonance imaging (fMRI) studies reveal neural correlates of risky stimuli or decisions in various brain regions including the striatum, insula, inferior frontal gyrus, lateral orbitofrontal cortex, and anterior cingulate cortex (Paulus, Rogalsky, Simmons, Feinstein & Stein, 2003; Huettel, Song & McCarty, 2005; Kuhnen & Knutsin, 2005; Rolls, McCabe, & Redoutem 2007; Tor, O’Doherty, Dolan, & Schulz, 2007). Decision making under ambiguity and under uncertainty is correlated to activities in the amygdala, orbitofrontal cortex, inferior frontal gyrus, and nsula (Huettel, Stowe, Gordon, Warner & Platt, 2006; Hsu, Bhatt, Adolphs, Tranel & Camerer, 2005).

However, few explicit distinctions between entrepreneurs and non-entrepreneurs have been made in empirical studies, other than the two referenced above. Shane (2003) argues that entrepreneurs use a qualitatively different decision-making process than others. Yet, this theoretical explanation remains untested and thus unsupported by empirical investigation.
Moreover, it appears very likely that neuroscientific methods are the only way to efficiently and effectively address claims such as Shane's. Thus, this study aims at clarifying whether there is difference in actual behavior and neural activities between entrepreneurs and non-entrepreneurs. Risk taking behavior seems an ideal starting point for neuroscientific analysis of entrepreneurs (Stanton & Welpe, i.p.) Moreover, the literature suggests that risk-taking propensity need not generalize. Thus, we aim to clarify if social & economic entrepreneurs tend to be more willing to take risk in general and/or only in business related situations, e.g., does an “opportunity” be triggered into something actionable and which factors are inhibitors. Finally, a key conundrum in social entrepreneurship research circle is whether social entrepreneurs differ significantly from economic entrepreneurs in how they perceive and appraise opportunities. Recall that the Krueger et al. 2009 study above found cognitive appraisal differed between the economic dimension and social dimension. When subjects were induced to think like a social entrepreneur, we saw more 'hot' cognition. This suggests the value of testing social entrepreneurs and economic entrepreneurs, rather than just entrepreneurs and managers.

Neuroscience offers us a different way of thinking about our research and the research questions that we ask. Simply by recognizing there are deeper levels than behaviors and attitudes, we open the door to a greater understanding of what makes entrepreneurs act. We already know that there is very much that “lies beneath” our usual data on entrepreneurs and entrepreneurship (e.g. Krueger 2007) but even a cursory review of neuroscience suggests that there is far more than we realize – and perhaps we can realize. That is, neuroeconomics and other neuroscience domains also show us that much more of our behavior is driven by physiological/neurological factors than we really might want to believe. *Homo oeconomicus* might have been already dead but neuroscience may have added the proverbial stake in the heart.

Understanding entrepreneurial behaviors requires understanding entrepreneurial thinking at a deeper level (e.g., Krueger 2007). But if we need that deeper understanding then we need theory and methods to match. Entrepreneurship as a field of research still has to struggle for legitimacy (Shane 2003) as an independent field of research and scholars have struggled to understand the distinctive contribution of the field of entrepreneurship. Where does studying entrepreneurship inform other domains?
We have all been deluged by items about neuroscience – neuromarketing, neuroeconomics and so forth (even neuroethics). Much of that is hype – but much of it is even more valuable than it seems. The field of entrepreneurship has evolved from looking at just “words and deeds” (Herb Simon's 'semantic' level) to attitudes and beliefs ('symbolic' level), but deeper still there is the 'neurological' level where we look as directly as we can at neural processes and activities. If we are to look at the neurological level of human decision making, then it seems likely that this will be very useful for a better understanding of entrepreneurs and entrepreneurship.

* It is an opportunity to ask questions that we could not answer before
* It is an opportunity to ask questions that we couldn't even think to ask before
* It is also an opportunity to ask questions in a better way & to get better answers

The latter point is a good place to start. Results and progress in entrepreneurship have sometimes been limited (if not potentially distorted) for methodological reasons. Leading voices such as Shane (2000, 2004) and Venkataraman (e.g. 1997) have noted that we have not properly and rigorously specified the dependent and independent variables, let alone account for the common variance between them.

Consider the perhaps focal phenomenon in entrepreneurship, *opportunity*. Rigorous measurement of, for example, the value and the qualities of entrepreneurial opportunities (e.g. Markman & Baron 2003; Sarason, Dean, & Dillard 2006) has been too often lacking. Neither have we controlled for obvious confounds such as the opportunity costs and outside options of potential entrepreneurs (Shane & Venkataraman 2000) nor controlled carefully for context effects such as the effect of growth motivation (Shane 2003). For methodological reasons, we too often take a static instead of a dynamic perspective by simultaneously analyzing the antecedents of perception, evaluation and exploitation, which seems especially advisable given that many selection steps are involved until the decision for or against entrepreneurship is reached (Shane 2000, 2004).

All this means that previous research to date has yet to truly answer the question, ‘who perceives, evaluates and exploits entrepreneurial opportunities’ (Shane 2003). Simultaneously, it
brings into serious question the methodological rigor of entrepreneurship as a field of research, but even where substantively rigorous, we have made insufficient use of the entire scope of available empirical methods, in particular, we have grossly neglected the use of experiments (Schade 2005).

If the field has underachieved in studying one of its central constructs then it would seem reasonable to seek different, more suitable methodologies. Consider again Herb Simon's classic distinction depicted below in Figure 1. Entrepreneurship research spent its formative years focusing quite understandably on the surface or “semantic” level: What people say and do. More recently, the rising use of social psychology, behavioral economics, evolutionary sociology, and cognitive and even developmental psychology has enabled the field to explore at deeper levels such as Simon's “symbolic” level: What people feel and believe.

Insert Figure 1 about here

For example, consider research into entrepreneurial intentions. Using proven models such as the Theory of Planned Behavior has been highly productive and yielded deeper (and more useful) insights than merely observing words and behavior. However, it has recently become clear that entrepreneurial intentions themselves rest upon deeper phenomena such as deep anchoring beliefs (Krueger 2007; Brannback, et al. 2007). If deep beliefs are critical, then we need to find methods that permit us to delve more deeply. But if we delve more deeply, we must do so with great rigor.

Simon's third and deepest level was dubbed “neurological” and argues that there is a substrate that is biological in nature, that our physiology comes into play in ways that cannot be understand without direct examination. The rising tide of neuroscience appears to offer both conceptual insights and empirical research tools that will help.

Consider again entrepreneurial intentions, then consider the classic work of Benjamin Libet who demonstrated the provocative finding that the experimenter can often detect human intent in advance, suggesting a neurological antecedent to intent and behavior. In turn, that opens the door for us to ask some new questions as well as shedding light on some older ones (such as the antecedents of entrepreneurial intent.)
Let us next turn to a brief, simplified overview of neuroscience and its potential to advance entrepreneurship research.

**Neuroscience: What Entrepreneurship Scholars Should Notice**

Recently neuroscience has become popular in research applications on social science and behaviors. Neuroscience focuses on the “ultimate black box” – the brain - and infers information from images of brain activity and similar techniques (Camerer, et al. 2005) Entrepreneurship increasingly takes advantage of rigorous experimental methodologies to better understand deeper structures of entrepreneurial cognition. Neuroscience, in particular, gives us new ways to conceptualize and measure important facets of entrepreneurial decision making.

How can neuroscience best inform entrepreneurship?

(1) By answering questions that have thus far resisted analysis of causal relationships.

(2) By enabling us to ask new questions we could not even ask before, For example, we can begin to identify the actual drivers of opportunity perception, but we can also map its pre-decisional dynamics. Just as neuromarketing and neuroeconomics have already yielded important new insights, why not neuroentrepreneurship?

Neuroscience is a general term referring to a wide range of techniques in which neuroscience methodologies allow for the investigation of ‘theories in use’ (Argyris & Schon 1996) rather then ‘espoused theories of action’ (Shepherd & Zacharakis 1999), overcoming retrospective bias, and enable the collection of contingent respondent data as well as the study of interactions among independent variables (Hitt & Barr 1989) and the neurological correlates of entrepreneurial decisions and behavior.

Note in particular that the popular view of neuroscience as being all about use of PET scans and function MRI and other mechanisms, the key import of using neuroscience is directing our attention for the first time to the biological dimension, the physiological and neurological substrate that drives our behavior far more than we realize – or can realize.

Note also that the growing interest in neuroscience appears to be driving increased interest in and utilization of rigorous, controlled experiments. Experimental methods have been rarely used in entrepreneurship research, often on the grounds that one cannot explore “real
world” behavior in a lab setting. Neuroscience, particularly neuroeconomics, has clearly shown the power of using experiments.

Insert Figure 2 here

Neuroscientific methodologies have been successfully applied in many domains: Witness neuromarketing, neuroaccounting, neuroethics and especially neuroeconomics. Neuroeconomics research argues that we must explicitly consider much deeper cognitive phenomena, even physiological, if we are to understand important human decision processes (Andreasen 2006; Camerer, 2006). For one very important example, this requires explicit consideration of entrepreneurial emotions, not just rational cognitions, something too rarely considered in entrepreneurship research (Spoerrle & Welpe 2006; Mitchell et al. 2007; Acs, Audretsch, Day, Krueger, Stanton & Welpe 2008).

Neuroscientific methodology is a potential means to overcome previous limitations in entrepreneurship theory and methodology because it offers a number of possibilities to address some of the methodological shortcomings, especially as a well-suited methodology to investigate pre-entrepreneurial decision processes and the cognitive and emotional processes underlying them, which have recently risen on the entrepreneurship research agenda (Baron 2006). Consider for example the neuroscientific evidence that rational and emotional cognitions take place in different parts of the brain. We have long studied differences between “hot” and “cold” cognitions but this evidence places that work on much stronger foundations.

For another important example, while we understand that perceptions of opportunity are the heart of entrepreneurial thinking, we have only a superficial understanding of “opportunity” as a construct and how to measure it (Baron 2006). Neuroscience argues that if perception of an opportunity is a phenomenon of profound importance, then we should rigorously identify salient neurological markers of opportunity perception in real time and of their antecedents (Cacioppo & Perry 1985; Camerer 2006).

More important: Do we know what actually triggers entrepreneurial action? An important extension of this is the extent to which “automatic processes” are part of the entrepreneurship process. Automatic processes exert minute or no conscious effort on part of the individual
(Bargh et al. 1996; Camerer et al. 2005). Neuroscience offers the potential to understand the operations and effects of such processes: “Because people have little or no introspective access to these processes, or volitional control over them, and these processes were evolved to solve problems of evolutionary importance rather than respect logical dicta, the behavior these processes generate need not follow normative axioms of interference and choice (Camerer et al, 2005: 11).

**Limitations of Neuroscience**

Of course, neuroscience is far from a panacea and offers its own weaknesses and limitation for entrepreneurship research. We are particularly interested in finding those limits. For example: Entrepreneurial action is not necessarily an action of an individual, but can also be an action of a group of people. How well are neuroscientific methodologies suited to explain group decision processes (West 2007; Kerschreiter et al. 2007)?

We will go into more depth into some of these issues but first let us look at some of the more popularized findings from neuroscience applications that also have implications for entrepreneurship and entrepreneurs.

**Automatic vs. Intentional Processing:** We have already addressed the issue of deep beliefs. Where that has surfaced is in research that looks at our colorfully-titled “inner zombie”, decision processes that we are not mindful of. While we may often exhibit intentional, planned behavior, much of our decision making is automatic processing, driven by deep assumptions that we are likely unaware of. This is highly adaptive in that we cannot consciously process every single decision we face.

**Mental Prototypes:** However, since we operate under significant bounded rationality, there are many gaps that our minds readily fill – often based on those deep assumptions. If we have automaticized how to drive out of a skid on an icy road, that is good. If our deep assumption is an ugly racial prejudice, that is very bad. We all have mental prototypes (not just stereotypes per se) of “opportunity” and of “entrepreneur.” If someone's mental prototype of “entrepreneur” does not include them, it will be much harder for them to become (let alone succeed at) entrepreneurial (Baron 2006; Krueger 2007).
Fluid Intelligence: Very recent work by Jaeggi and colleagues (2008) showed that fluid intelligence [ability to solve new problems] need not be fixed, but can be increased by compelling subjects to solve important, complex new problems. Entrepreneurs are a population that almost by definition face a steady stream of important, complex new problems. They could make idea research subjects, Also, Jaeggi et al looked at activity in working memory as a key leverage point in this process, suggesting that this might be fruitfully explored neuroscientically.

Change Blindness: One of the most famous experiments asks viewers of a video to count how many times people pass a ball. In the middle of the video, a person in a gorilla suit walks through quite visibly, yet the experimental subjects tend to not see the gorilla at all. Later work by Triesch and colleagues argues that we focus our attention in ways that preclude noticing other things. Rather the physical appearance of a gorilla or Triesch's colored blocks, entrepreneurs may focus in ways that preclude them seeing obvious opportunities (or, worse, visible threats.) These attentional limits are grounded in neurological realities that we now have the tools to explore.

Opportunities from weaknesses in existing entrepreneurship research

The next section reviews some methodological challenges and shortcomings of entrepreneurship research that particularly illustrate the potential contributions of neuroscience for the study of, for example, entrepreneurial opportunities.

Pre-entrepreneurial processes: Affective & cognitive reasoning. Perception and positive evaluation of entrepreneurial opportunities are preconditions for any entrepreneurial activity it is surprising that most entrepreneurship research to date has started after the decision to exploit an entrepreneurial opportunity has been taken (Shane 2000). As a consequence, we know only little about the pre-exploitational decision processes of potential entrepreneurs. Thus, the majority of studies have not looked at the antecedents of the actual decision to act entrepreneurially but have focused on researching individuals who have already decided to become entrepreneurs. As a consequence we know only very little about the pre-entrepreneurial decision processes. However, the increasing interest in the concept of opportunity has been accompanied with an increased interest in the earliest phases of the entrepreneurial process
(Shane 2001, 2003) and researchers such as Shane (2003) have argued for the study of decision processes leading up to the decision to become an entrepreneur. Research studying the actual decision to exploit entrepreneurial opportunities would greatly enhance current understanding of entrepreneurship (Shane, 2003).

Studying pre-decisional processes lends itself well to experimental methods, however, the foregoing suggests that it is imperative to dig more deeply than surface phenomena and even beyond Simon's symbolic level and understand the physiological underpinnings.

A better understanding of the pre-entrepreneurial decision processes would also help us to better refute or confirm conceptual theories that have been put forward by scholars. For example, Shane (2003) argues that entrepreneurship uses a qualitatively different decision-making process than the one used by the participants to buy and sell standard resources in the market place. This theoretical explanation as Shane (2003) admits remains yet untested and thus unsupported and by empirical investigation. Currently, entrepreneurship scholars offer only theoretical descriptions of the judgmental decision-making processes that entrepreneurs use (Sarasvathy et al 2001). Ardichvili, Cardozo and Ray (2003) note that a number of conceptual models on the pre-entrepreneurial process have been proposed in recent years based on conflicting assumptions borrowed from a range of disciplines, ranging from cognitive psychology to Austrian economics.

Research on entrepreneurial cognition has increased during the last years and Mitchell et al. (2007) define entrepreneurial cognition as the knowledge structures that people use to make assessments, judgments and decisions involving opportunity evaluation and venture creation and growth. The Austrian perspective would argue that it is mainly differences in information that determines whether opportunities are discovered and exploited. Mitchell et al. (2007) already acknowledge upcoming changes to entrepreneurial cognition research: Besides emotions and affect they refer to entrepreneurial action as important route for further analysis. An important question in entrepreneurial cognition research is how entrepreneurs deal with information. Given the importance if the explaining opportunity discovery to our understanding of the entrepreneurship process, empirical evidence that supports or refutes the Austrian perspective of the discovery process is important (Shane 2000).

**Common variance bias.** Much of the existing empirical research has assumed that the
attributes of people who discover opportunities are uncorrelated with the attributes of the opportunities that they discover (Evans & Jovanovic 1989). Researchers making this assumption have studied how individual differences affect the way people exploit opportunities while ignoring attributes of the opportunities themselves. However, if human attributes are correlated with the opportunities that people discover, then these researchers have confounded attributes of entrepreneurs and opportunities in empirical tests of who is an entrepreneur (Venkatraman 1997). Entrepreneurship research needs to incorporate the interaction of opportunities and individuals and find ways to measure both in fair comparisons. The joint investigation of both factors is critical to the investigation of the individual-opportunity nexus advocated by Shane (2000, 2001, 2003) and other scholars. Entrepreneurship cannot be only a fixed attribute of certain people, but must involve their reaction to the existence of opportunities (Shane 2003). However, to date, very little research has incorporated both parts of the puzzle in a fair way.

**Dynamism of entrepreneurship processes.** Shane argues that entrepreneurship is a process with tremendous selection at each step and the field needs to use research methods that are appropriate to the study of the phenomenon. As entrepreneurship is a dynamic process it demands investigative techniques that take this dynamism into consideration. However, most research about entrepreneurship – whether it is psychological – or economic in nature – tends to be static, seeking to explain outcomes as if they are found in equilibrium or are in some sort of permanent state. Static research designs in entrepreneurship, however, are problematic, as they assume that a given independent variable influences all steps in the entrepreneurial process equally, and that the effects of a given independent variable do not select our some people at earlier stages in the process.

Shane, Locke & Collins (2003) emphasize that entrepreneurship is a process that occurs over time and criticized that previous research has not looked at the effects of independent variables on specific steps in the entrepreneurial process. Shane (2003) and Shane & Venkatraman (2000) argue that the discovery of opportunities does not automatically result in exploitation, but that opportunities are exploited only when an entrepreneur decides to exploit an opportunity she perceives. Failure to treat entrepreneurship as a dynamic process obscures the fact that most entrepreneurial activity is episodic, staged and short-lived and involves much
Simultaneously analyzing the antecedents of opportunity perception, evaluation and exploitation, seems especially advisable given that many selection steps are involved until the decision for or against entrepreneurship is reached (Shane 2000, 2004). As a result of the aforementioned limitations, previous research to date has insufficiently answered the question, ‘who perceives, evaluates and exploits entrepreneurial opportunities’ (Shane 2003), has led to inconsistent results with regard to the influence of individual characteristics on entrepreneurial behavior (e.g. Gartner 1988; Keh, Foo, & Lim 2002) and has questioned the methodological rigor of entrepreneurship as a field of research. Shane & Venkatraman (2000) also point out that to date we do not know why some people and not others exploit opportunities that they discover.

We need more research that examines the actual decision to exploit opportunities rather than the static nature of being an entrepreneur (Shane 2003). Research on the actual decision to exploit opportunities among people at risk of such exploitation would overcome many of the limitations inherent in much of our existing research on this topic as well as provide more precise explanations for how individual differences influence the entrepreneurial process (Shane 2003). By using a dynamic approach to investigation researchers could capture these essential features.

For example certain independent variables that are physiological in nature might have a different effect on opportunity discovery, evaluation and exploitation. For example, how does the role of trust affect the process - and vice-versa? Over a very short time horizon, one could argue that entrepreneurial decision making was classically rational, however, over the entire process, it makes plausible sense to consider the deeper level.

Consider also the role of triggers (e.g. Shapero's precipitating event [Krueger et al 2000]) that link intent to action. If triggering events do occur, entrepreneurship scholars need methods that permit identifying these phase changes in entrepreneurial thinking. Neuroscience research is beginning to understand the “aha!” moment, for example, when subjects considering future circumstances identify a positive future state, we see increased activity in the amygdala.³

Failure to consider the dynamic nature of the entrepreneurship process has led the field to develop an ignorance about these differences, which hinders the development of a true

³ Again, please note that we are simplifying, often significantly, to illustrate points.
understanding of entrepreneurship. But to fully consider the dynamics, we need the insights and the research sensibilities we find in neuroscience.

**Conflicting effects of independent variables.** Not analyzing potentially conflicting effects of independent variables on entrepreneurial processes has been a consistent *bête noire* for entrepreneurship scholars. For example, people who are high in independence may be more likely than those low in independence to exploit entrepreneurial opportunities, but they may not be better at formulating strategies that capture the returns of the entrepreneurial activity (Shane, 2003). It is likely that the factors that explain one part of the entrepreneurial process (e.g. opportunity evaluation) do not necessarily explain other parts (e.g. opportunity exploitation). Researchers interested in explaining the effects of independent variables on the exploitation of opportunities should also consider the potentially conflicting effects of specific individual variables on different aspects of the entrepreneurial process, and on performance at entrepreneurial activity (Shane 2003). This often requires experimental methods to counteract this and, again, the critical independent variables may well prove to be physiological.

**Perceived value of opportunities.** While it is apt to say “opportunity is in the eye of the beholder” we have often failed to use that in our research. A major criticism of prior research in entrepreneurship is that we simply use the construct “opportunity” and the size, quality, attributes and opportunity costs of entrepreneurial opportunities have not been controlled in a dynamic research design (Shane, Locke & Collins, 2003). Opportunities can differ on multiple dimensions. In order to accurately measure the effect of independent variables on entrepreneurial decisions, it is necessary to control the qualities and effects of opportunities (Shane, 2000; 2001). Venkatraman (1997) argues that opportunities are valuable for individuals if they exceed the entrepreneur’s opportunity costs and offer a premium for the illiquidity of money, time, and effort expended and a premium for bearing uncertainty and risk. Because opportunities will differ in these aforementioned qualities, the nature of opportunities will influence the entrepreneurial decisions (Shane, Locke & Collins 2003). Unless researchers know the effect exerted by the opportunities themselves, they cannot accurately assess the effect of the independent variables on entrepreneurial decisions. Without such controls, researchers cannot know whether the observed effects represent the effects of the independent variables or the
effects of the unobserved relationship between the opportunities and the independent variables, such as motivation to exploit opportunities (Shane 2000, 2001). Shane, Locke & Collins (2003) note that previous research has generally failed to control the effects of opportunities by modeling the value of the different opportunities pursued.

Future entrepreneurship research should thus study identical opportunities in designs, which allow respondents to make a series of entrepreneurial decisions in a controlled simulation, limiting sources of variance outside of the independent variables.

Note that all the foregoing suggests the growing realization that experimental methods are needed to address common method variance as well as to simultaneously assess rational and emotional cognitions.

**Neuroscientific designs as possible solutions?**

Entrepreneurship as a field of research is in need of methodologies that are able to study the phenomena. Shane (2003) argues that entrepreneurship researchers need to make changes to their research methodologies. First and foremost, researchers need to develop hypotheses and test explanations rather than just assemble facts. This, however, poses a not so trivial challenge for entrepreneurship researchers, since in real life studies, the situation in which a (potential) entrepreneur is involved can hardly be controlled, nor can the situation be manipulated and randomly assigned to (potential) entrepreneurs. Neuroscientific studies would seem a promising possibility.

Here we propose neuroscience as a source of research design (not just methodology) which allows for the current analysis of entrepreneurial decision processes while at the same time controlling for the situational specifics of entrepreneurial opportunities. By proposing experimental neuroscience our study also answers the call for research on methodologies that enable entrepreneurship researchers to simultaneously control for the influence of opportunity and individual characteristics on entrepreneurial decision-making (Shane et al. 2003). It also corresponds to Gatewood, Shaver, and Gartner (1995) who advocate the use of experimental designs in entrepreneurship research in order to randomize the allocation of respondents to research conditions.
Types of neuroscientific experiments

<table>
<thead>
<tr>
<th>Predominant subject pool</th>
<th>Natural experiments in the field</th>
<th>Economic experiments in the lab</th>
<th>Hypothetical questionnaire experiments</th>
<th>Quasi-experiments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-students</td>
<td>Students</td>
<td>Students and non-students</td>
<td>Students and non-students</td>
<td></td>
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<tr>
<td>Non-students in a mobile lab</td>
<td></td>
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<tr>
<td>Environment</td>
<td>Natural</td>
<td>Artificial but context can be manipulated</td>
<td></td>
<td></td>
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<tr>
<td>Stakes</td>
<td>High</td>
<td>Usually low but high stake decision can be implemented via ex-post random draw (Schade et al. 2002)</td>
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</tr>
<tr>
<td>Incentives</td>
<td>High</td>
<td>High</td>
<td>None (though flat payment for participation but incentives are not coupled to decisions)</td>
<td></td>
</tr>
<tr>
<td>Manipulation</td>
<td>Not possible</td>
<td>Conditio sine qua non</td>
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</table>

Table 1: A possible classification of experiments

Schade & Burmeister (2008) offer the above Table 1.

Advantages of (different types of) neuroscientific experiments

One key advantage of using neuroscience experiments is their ability to focus closely on individual decisions (Schade, 2005). An experiment enables the plausible establishment of causality and, if properly designed, can exclude alternative interpretations by direct and indirect control. Experiments thus address the internal validity problem of empirical research in entrepreneurship. In entrepreneurship, many objects and relationships are dynamic or embedded in a dynamic environment and these dynamics threaten the reliability of identified relationships in field studies. Only with experimental control can we effectively discriminate the factors of interest from other factors, often rapidly changing. Schade (2005) explains the advantages and necessities of using experimental methods in entrepreneurship. More recently, Burmeister & Schade (2008) offer this ever-growing list of neuroscientific experiments (defined broadly).
It certainly appears that the ground has been tilled and appears fertile, it awaits only the next step, which is more explicit testing of physiological variables.

**What research questions appear particularly suited for neuroscience methodology?**

Obviously, there are many questions relevant to entrepreneurial decision making and action. Given the extent of research in neuromarketing and especially neuroeconomics, we already see the breadth and depth of potential topics where we need to consider Simon's neurological level. We have already discussed how some existing research challenges can be addressed. But what else seems fruitful? Table 2 above suggests there are many interesting questions. Moreover, there is a wide array of models and hypotheses from behavioral decision
theory that neuroeconomics has already begun to explore experimentally (e.g. Camerer et al 2005, Camerer 2006).

One area that seems especially intriguing for entrepreneurship scholars deals with deeper cognitive structures and how we can investigate them. For example, Mitchell (2000) notes that we can identify cues for an entrepreneurial script, but not detect the script directly. We may now have the tools to identify exactly when such a script is switched on or off. We had already mentioned the utility of identifying the triggers from intent to action. For example:

* When does this “good idea” coalesce into a genuine “opportunity”?  
* When does this “opportunity” be triggered into something actionable?

We already see hints of both these tipping points as entrepreneurial intentions evolve (Brannback, et al 2007). This research could vividly demonstrate them.

We know that in human learning, it is far more than merely acquiring items of knowledge content, true learning entails changes in how we structure that knowledge. Neuroscience methods may help us to see some hint of those differences. In particular, knowledge structures often change discontinuously in the wake of critical developmental experiences as show in Figure 3. (Another variant of the “aha!” moment.)

insert figure 3 here

The variety of potential topics is quite broad; the following is just a sampling of entrepreneurship-relevant topics:

**Behavioral Decision Theory**

Framing Effects & Paradoxes - Consider the extensive experimental evidence that has elucidated our understanding of things like Kahneman & Tversky's classic gain-loss framing effects (prospect theory) including work assessing the role of affect in decision making. What we are seeking to explain are the various consistent deviations from rationality that we observe, typically in pencil-and-paper exercises.

A very early experiment with an entrepreneurship theme showed how perceived self-
efficacy would override the Ellsberg Paradox which reflects aversion to high uncertainty [as opposed to Kahneman & Tversky looking at risk aversion.]

Research Opportunities: We can manipulate perceived uncertainty and observe decisional outcomes such as choice of script. Also, other paradoxes (e.g. the Allais paradox) that reflect seeming violations of rationality have not been well-tested in the lab, let alone in the entrepreneurial context.

Preferences - Preference judgments can now be observed through neuroimaging. Thus, entrepreneurial preferences with regard to resource mobilization, resource commitments, and decisions on how to exploit a perceived opportunity could be studied.

Research Opportunities: Human decisions are inherently multi-criteria; multi-attribute utility theory (MAUT) can be explored more directly with tight experimental controls. We have recently observed lexicographic preferences in entrepreneurial intentions (Douglas & Shepherd, 1999; Krueger, et al 2009).

Utilities - Activity in the rewarding behavior is likely to influence entrepreneurial decisions, e.g. how much to invest, general disposition to sell winning investments too early. Investing money and gaining is shown to correlate with activation in the rewarding system.

Research Opportunities: Neuroimaging technique allows us to measure the utility derived from a good objectively. There is also a difference between the expected and the experiences utility. Release of dopamine might lead to acceptance of risk more easily. Previous research shows that dysfunction on the OFC-amygdala-Nac reward circuit explains extreme risk-seeking behavior. All of these aspects could be studied experimentally.

Game Theory

A specific area of human decision making that lends itself to experimental study has been the use of games whose rules have been cleverly specified so as to elicit interesting phenomena. Much of neuroscience's best-known work has been focused on games.

Research Opportunity: The classic Prisoners Dilemma and the recently popularized Ultimatum Game have rarely, if ever, been used with an entrepreneurial setting. For example, could we reverse the Prisoners Dilemma with the “prisoners” replaced by two VCs unable to communicate about investing?
Perceptions

A core topic in any book on cognition is perception; it is also a core topic in any book on experimental psychology. Most of the key phenomena in entrepreneurship research are perceptions-based (Douglas 2008). What is “opportunity recognition” without opportunity perception? In the lab, we can manipulate perceptions quite readily.

Research Opportunities: Kirzner (1973) argued that entrepreneurs need a significant degree of alertness to opportunities. Alertness is likely situational (Shapero’s analogy was to ask in what directions is an entrepreneur’s antenna tuned?). Controlled experiments could map that ‘tuning.”

In general, we have devoted considerable effort to research into how we recognize, discover, identify or enact opportunities and threats. However, very little of that research has explored, for example, the psychophysics of perception.

Finally, entrepreneurs are renowned for their above-average abilities to “connect the dots” in enacting opportunities. Whether the experiments focus on "dot connecting" or on broader issues of pattern recognition, we can draw upon a long tradition of research into pattern recognition, its antecedents and consequences.

Emotions & Affect

Affect - . Neuroeconomics suggests that that decision-making as hypothesized in economic theory depends on prior emotional processes. To date only very few studies and economists have studied the role of emotions in entrepreneurial decision-making (e.g. Baron & Ward 2004).

Research Opportunities: We could look at the role of emotion in uncertain conditions. The influence of emotions on entrepreneurial decisions should be greater in situation is supposed to be even greater than in certain ones. Thus, entrepreneurship with all its uncertainty and risk makes a prime context for studying the impact of emotions on decisions. We could use cognitive appraisal theory (i.e., primary appraisal, rationality, irrationality, and coping potential) in entrepreneurial situations in order to examine the impact of cognitive and emotional processes on the evaluation and exploitation of entrepreneurial opportunities.
Passion & Fear – We can look specifically at passion and fear, two popular themes relating to entrepreneurial decision-making. Long ago, Keynes argued that initiative-taking was not a function of rational calculation but the presence/absence of a more emotional factor he called “animal spirits”.

Research Opportunity: As such, this would seem particularly amenable to study using neuroscience techniques; is entrepreneurial passion merely the arousal of the amygdala?

Trust - Cooperating, trusting others, etc are important aspects in the creation of a venture. We could design imagines or real scenarios in which we manipulate the social and the entrepreneurial aspect and see what influences evaluation and exploitation of these entrepreneurial opportunities. Social neuroscience provides insights into the neural mechanisms underlying our capacity to represent others intentions and feelings, referred to as “empathy” (Singer & Fehr, 2006).

Research Opportunities: What if trust is merely the consequence of a hormonal change (e.g. oxytocin)?

Conclusion and Recommendations for Future Research

We argue that neuroscientific methodologies studies are suitable for, at minimum, a subset of research questions in entrepreneurship. Neuroscientific methodologies studies are especially useful for controlling the value and of entrepreneurial opportunities, for analyzing the cognitive and affective processes in the pre-entrepreneurial decision processes (pre-stage) (including cognition and effective influences) and for studying decision-processes in a dynamic perspective.

However, it is important to note that neuroscience offers us a different way of thinking about our research and the research questions that we ask. Simply by recognizing there are deeper levels than the semantic and symbolic, we open the door to a greater understanding. There is very much that lies beneath our usual data on entrepreneurs and entrepreneurship.

Moreover, there is considerable evidence from neuroeconomics and elsewhere that much more of our behavior is driven by physiological/neurological factors than we really might want to believe.
We intended to provide a simple overview that examines the application of neuroscientific methodologies to existing research questions in entrepreneurship. At bottom, our intent was to make some small contribution to the discussion of how to test and develop entrepreneurship theory and to have added to the spectrum of entrepreneurship research methods, overcoming some of the challenges faced by alternative methodologies.

To conclude, we have all been deluged by items about neuroscience – neuromarketing, neuroeconomics and so forth. Again, some of that is hype – some of it is even more valuable than it seems. And again, if we are to look at the neurological level of human decision making, then it seems likely that this will be very useful for a better understanding of entrepreneurs and entrepreneurship. What should be growing now is the realization that neuroscience offers us a chance to learn things from entrepreneurs that we can apply even more broadly.

We may not like the answers we find – what if entrepreneurs really are born, not made? Or, more likely, driven by deep beliefs learned in early childhood? That entrepreneurial decision making is hostage to our neurochemistry?

Selected Key References


Figure 1. Simon's Levels

- **Semantic Level:** what we say & do
- **Symbolic Level:** attitudes, beliefs, intent?
- **Neurological Level:** biological processes
Figure 2. The domains of neuroentrepreneurship and experimental entrepreneurship

Figure 3. Critical developmental experiences
Focus has been slowly but surely turning to the potential for entrepreneurship to lead local economies out of difficult economic times. The entrepreneurial sector has led the rest of the economy out of every recession since before 1900, yet we continue to wrestle with how do we best nurture entrepreneurial activity.

What is it that we should be doing? (Or not doing?)

We offer here a panel of four experts on this question. Each brings a strong theoretical perspective that they themselves championed, yet all four are equally passionate about the practical and pedagogical implications of their work.
Strategic Alliances between Small and Large Firms

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Organization: Industry Canada

Abstract:
Small firms are sources of new ideas but lack the ability to develop them commercially in the way large firms do. This potential for mutual benefit is the focus here, aiming to understand how and why these linkages between small and large firms come about, and to investigate the “dark side” of these alliances. This paper identifies the resource-based and transaction costs theories as the most appropriate to jointly characterize the interaction between small and large firms. A questionnaire is used to jointly interview more than a dozen pairs of small and large partners. This study finds that (1) complementarity of resources allows for mutual help in surpassing internal and external constraints; (2) systemic and strategic learning is at least as important as technical learning; (3) asymmetric dependence and opportunistic behaviour are significant concerns; (4) virtually all interviewed firms expect strategic alliances to play an increasing role in the future.

Keywords: strategic alliance, small firms, large firms, resource complementarity, asymmetric dependence, opportunistic behaviour

I. Introduction

It is widely recognized throughout both policy and academic circles that one of the keys to growth in an economy’s competitiveness and prosperity lies in the degree of innovation in an economy. Macro efforts to stimulate innovation outputs however have varied in their effectiveness: while higher expenditures on research and development generally result, these have not always been translated into a larger number of commercialized innovations within a specific economy. At a deeper level the micro aspects of business activity suggests that entrepreneurship is also an important element in creating high growth companies and prosperity. Much attention has been directed at small high growth companies, which contribute

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1 This is very much work in progress. Please do not cite without the permission of the author.
2 I am indebted to Professor Brahim Allali (HEC Montreal) for his tremendous efforts to put together six case studies as part of this project and to Chris Parsley for initiating this research and managing it throughout.
disproportionately to employment creation and which are consequently touted as engines of economic growth. However, the relationship between entrepreneurship and innovation at the level of the firm is not well understood. Moreover, small firms may be entrepreneurial and even R&D intensive, whereas large firms are big spenders on R&D but are not generally thought of as particularly entrepreneurial. Consequently examining the interplay between small and large firms and the strategies they adopt could increase our understanding of the entrepreneurship-innovation relationship and hence their ability to compete and prosper.

As a first step in this process this paper attempts to lay out a framework for examining the links between large firms and small firms with respect to entrepreneurial behaviour and innovation. This begins with the entrepreneurship definition adopted by the International Consortium on Entrepreneurship (ICE)\(^3\) and the Organization for Economic Cooperation and Development (OECD) which does consign entrepreneurial behaviour to small firms, but allows its existence in large firms. Small firms are often sources of important new ideas but lack the ability to develop them commercially in the way large firms do. It is this potential for mutual benefit that is at the heart of this project: to understand how and why these linkages between small and large firms come about and also to assess whether there is a role for government in facilitating such strategic alliances.

The research questions that this paper seeks to answer include: How are these mechanisms initiated? What specific arrangements are most effective for successful strategic alliances? What are the strategies for innovation that are pursued in small firms and large firms? How do they differ? How is entrepreneurship embedded in large firm strategies? What are the

\(^3\) Industry Canada has also been leading work on strategic alliances within the International Consortium on Entrepreneurship (ICE).
challenges to the start-up and stability of these linkages? How is decision making undertaken in the alliance?

This paper is structured as follows. The following section lays out the definition of entrepreneurship and strategic alliances\(^4\) and discusses the scope of these concepts. A literature review is then used to discuss the theoretical underpinnings of corporate behaviour, the reasons for strategic alliances and the findings from studies on the effectiveness and durability of strategic alliances. Some of the material is confined to an appendix for brevity of presentation. The last part of the paper seeks to use this information to identify the type of information sought and the considerations around the resources brought to an alliance that will need to be borne in mind in undertaking the case studies. A case study approach is pursued given that information on business strategy is generally unavailable at the level of the firm. Section IV describes the case study approach and presents preliminary results. Section V concludes.

\textbf{II. Concepts and Scope}

\textit{Entrepreneurship}: There are many definitions of entrepreneurship but this paper follows Ahmed and Hoffman (2007) and defines entrepreneurship as actions by individuals and/or business owners who seek to generate value, through the creation or expansion of economic activity, identifying and exploiting new products, processes or markets.

The definition highlights the essential feature of entrepreneurial activity as creating something new (products, processes or markets) which is suggestive of the role of innovation in entrepreneurship. The focus is on the activity not the organization or the individual. Furthermore by using the word “seeking” both success and failure are included in the notion of entrepreneurial activity.

\(^4\) Strategic alliances, partnerships, and collaborations will be use interchangeably throughout.
For the purpose of this paper it is important to underline that no reference is made in the definition to business size. Entrepreneurial activity can occur within a firm by an individual who has no stake in the company. Entrepreneurship can potentially exist within all companies and is not the sole preserve of small businesses and the self-employed. The concept of corporate entrepreneurship has thus evolved to describe the ways in which established firms – generally large ones – can be entrepreneurial.

*Corporate entrepreneurship (CE):* Teng (2007) defines CE as “the process by which firms innovate, form new businesses and transform themselves by changing their business domain or processes”. The aim is to “leverage current competencies and evolve new ones through innovation for the purpose of growth and corporate renewal” O’Connor and Hyland (2008). There is a clear and specific link to innovation as an important component of entrepreneurship.

Examples of corporate entrepreneurship include i) corporate venturing where established businesses create and advance new businesses within their firms in order to promote internal growth; ii) intrapreneurship – independent innovation by individuals within the established company – and the notions of championing an innovative idea and iii) fostering a management culture and attitudes that orients the company to being entrepreneurial. The distinct literature on corporate entrepreneurship is viewed through the lens of the large established firm which has resources to invest in different types of entrepreneurial activity (O’Connor and Hyland, 2008).

*Strategic alliances (SAs):* Linkages is a loose term that has been applied thus far – the subject of strategic alliances however is a recognizable strand in the CE literature. Strategic alliances are inter-firm cooperative arrangements that allow firms to temporarily seek resources from others for their own benefit. The partners’ autonomy is preserved and consequently the original entities do not lose significantly their independence in the choice of their objectives and
definition of their strategies (Dacin et al, 2007, BarNir and Smith, 2002). This is not the case with mergers and acquisitions, where a single chain of command is formed (e.g. Daimler Benz and Chrysler in 1998). Hence strategic alliances would include joint ventures - where two companies would establish a new company for the purpose of developing an innovation - but exclude mergers and acquisitions.

Specific cooperative agreements under a strategic alliance are bounded by two extremes: spot transactions undertaken by two firms, and their complete merger. In between lie a plethora of cooperative agreements that are characterized by a different degree of inter-organizational dependence. Examples include start-up assistance agreements, licensing agreements, franchising, know-how licensing, buyer-supplier relationships, outsourcing agreements, joint marketing agreements, non-equity cooperation in research, development or production equity joint ventures.

There is a vast richness of specific arrangements: both the legal form of the agreement and the strategic impact on the operations of each partner can vary and an infinite number of inter-organizational arrangements can be derived from the complex formal contracting and informal linkages (Diagram 1). In general, as one moves to the right there is an associated increase in contractual requirements as firms become more and more integrated. However, this is a gross oversimplification that cannot do justice to the richness characterizing the reality of those inter-firm multi-dimensional arrangements.

**Diagram 1**

[-----------------------------------------------]
Spot exchanges  Marketing agreements  Franchising  Equity joint ventures  Mergers

Alliances can be between partners that are competing firms or not. Alliances between competitors include shared-supply alliances, quasi-concentration alliances, and complementary alliances. Partnerships between non-competing firms can be categorized as international
expansion JV, vertical partnerships, and cross-industry agreements. The wide spectrum of inter-firm collaboration can range from R&D collaboration to cooperation in the commercialization aspects of market activities. These efforts are coordinated via a large and varied set of agreements, both formal and informal.

Large firms seem better placed to “go it alone” compared to small firms (Baum et al, 2000). They have more options at their disposal which in turn allows them to better compete in global markets. For example, large firms can choose to develop technology in-house, to acquire new technology across markets via licensing, or to collaborate in research ventures with universities, government research facilities, or with other firms. What they lack generally is flexibility in responding to market signals and the innovative intensity that characterize small firms. Hence, there is tremendous scope for collaboration between the large firms and small and medium-sized firms that will allow mutual help in surpassing internal and external constraints.

The essential point is that despite the wide range of specific activities, strategic alliances are just one avenue for firms to address their resource gaps. The next task is to examine the theoretical foundations of SAs and the results from the literature on strategic alliances.

III. Theories of Strategic Alliances

The review of the literature will consider not just the theoretical models of firm behaviour and how they explain strategic alliances but also specific reasons to join such alliances. Much of

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5 International expansion, as the name suggests, is a strategic move whereby a company extends its activities into new geographic markets. Vertical integration corresponds to a strategy by which a company extends its activities upstream and downstream, in order to become its own supplier or customer (the make or buy decision). Cross-industry agreements achieve diversification by expanding a company beyond its industry of origin. The diversification can be either technology-related, market-related, or conglomerate in nature. (Hagedoorn, 2002).

6 Long-term strategic alliances are the main formal vehicle used to improve a firm’s competitive position and involve a significant amount of planning from the participants. Cooperative ventures with short life span exist as well, revolving around a more specific project, but they still require a certain amount of planning. Both types of venture, either long- or short-termed, involve commitment and resources devoted to the discovery and enforcement of new rules of the game defining the cooperative behaviour. Less formal inter-firm collaboration exists too, used to take advantage of unforeseen opportunities, or to implement last resort solutions.
these reasons relate to what assets small and large firms can bring to such a cooperative agreement and the differences between say a small high growth firm and a large established firm. Strategic alliances may therefore take advantage of synergies in the differences of the two types of organizations. However a further consideration is the degree to which strategic alliances are stable in the longer term and this is also addressed in the literature.

a) Theoretical Underpinnings of Corporate Behaviour

The number of theories of the firm is quite large and many are consistent with the establishment of strategic alliances. A broad selection of these theories is briefly outlined in Appendix A. Reuer (2004) and Faulkner and de Rond (2000) are good sources. From the literature however it is evident that the resource-based theory is the most prominent along with the theory of transactions costs (Das and Teng, 2000, Chen and Chen, 2003, Yasuda, 2005). Briefly, the resource-based theory allows for firms to maintain positive rents from its assets - unlike the theory perfect competition where competition always drive the rents to zero. A firm can sustain a competitive advantage by configuring its tangible and intangible assets in such a way that is difficult to imitate, or by acquiring resources, skills and capabilities that are durable yet not perfectly transferable or replicable. Where it cannot access all the resources it seeks, it can engage in a strategic alliance.

This theory can be couched in terms of transactions costs if the sustainable competitive advantage is thought of as a specific asset. Transactions costs are the costs of establishing and maintaining property rights over resources (e.g. monitoring transactions, negotiations, etc). Transactions cost theory looks at the choice between internalizing a certain economic activity and contracting for it over markets. Williamson, as one of the founders of this theory, emphasized asset specificity and the recurrent nature of transactions as key factors affecting the choices
concerning governance. As a result, cooperative behaviour would result in cost reductions through the choice of appropriate organizational structures (Chen and Chen, 2003, Yasuda 2005).

In essence the strategic alliance can therefore be viewed as reflecting what the small firm brings to the agreement, what the large firms brings to the agreement along with the potential to reduce transactions costs. The types of assets can typically be financial, technological, human resources or managerial capacity. The nature of these resources and their particular characteristics that make them able to command rents is explored further in the paper, but the development of strategic alliances can be viewed in reference to the resource based theory of the firm. Hence one needs to consider what the literature indicates on the general reasons for the existence of strategic alliances and then to discuss particular differences between a small firm interested in growing and a large firm interested in being more innovative and entrepreneurial.

b) The rationale for the existence of strategic alliances

The literature highlights a plethora of reasons as to why strategic alliances are attractive for firms generally. The following summary is, like any categorization, somewhat ad-hoc and does contain a certain overlap between categories. The following reasons are at various times found to be significant factors in the development of strategic alliances among firms of all sizes. Table 1 therefore offers a synthesis of the major reasons for alliances.

c) Different resources of small, growing firms versus larger, established corporations

Disruptive innovations increasingly originate in the private sector’s emerging growth firms7 (Das & Teng, 2000). In contrast, relatively large firms find it difficult to replicate the environment for spawning such rapid innovation. Both types of companies could therefore

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7 Growth firms are not new companies: roughly half of them are in business for more than a decade before suddenly experiencing rapid growth (Acs et al, 2008). A small share of growth firms accounts for the bulk of the net job growth in an economy (Halabisky et al, 2006). Equally important, growth firms offer a large contribution to the overall innovation in the economy. They shake up markets and exert pressure on larger firms to innovate. To this extent, growth firms are qualitatively different than regular small firms.
benefit from a strategic alliance while speeding the process of experimenting with the firm’s own R&D ideas (Tatum 2007).

It is instructive to compare the environments in which small growing firms and large established firms operate. Areas of difference that are identified include 1) the nature of innovation; 2) the approach to the market, 3) the management culture, 4) the business model, and 5) capital deployment (Tatum 2007). These different dimensions suggest tremendous opportunities for synergy and what each partner can bring to the alliance, but they also highlight some sources of tension.

Small firms have been the primary source of innovation at the root of the industrial economies’ tremendous growth (Baumol, 2002, Audretsch and Aldridge, 2008). This is not to say that large firms have little contribution to or undertake ineffective innovation activities. In fact the bulk of R&D expenditure originates with the large firms. The main contention is that the two types of firms take on different roles in the process, with the specialization yielding spectacular results. The small firms are usually more technologically inventive than the large firms. As a result they manage to attract the most competent scientists and engineers. On the other hand, large firms are associated more with incremental innovation (Baumol, 2006, Audretsch & Feldman, 2003, O’Connor & Hyland, 2008, p. 22).

While regular firms prepare carefully for a product launch, small growing firms necessarily improvise as they go, discovering the right product and the target customer on the fly. In the early stages of the innovation process smaller entrepreneurial firms necessarily have to stay close to the customer base, which precludes a distribution channel such as the large established firms would employ.

In terms of management culture, established firms reward managers according to revenue and earnings, while small entrepreneurial firms reward management on the basis of the potential
impact of innovative products or processes. Since profitability in the latter case cannot yet be observed the appraisal is done by professional private equity investors and the focus is on the value added via innovation\textsuperscript{8}. Consequently the management skills required are quite different in an environment of product development in an ever-changing, fast-growth environment compare to that of overseeing of scaling-up production at large established firms.

The business models of small entrepreneurial firms are different from the large established firms as well. Large firms invest in new knowledge with the goal of using it in the context of the current business model by taking advantage of the current operating scale and the associated efficiencies. The constraint represented by the existing business model rarely allows for a disruptive market effect of the new knowledge. Whereas small entrepreneurial firms are in the process of continually refining the business plan and this inherent flexibility is a key aspect of the innovative potential.

Capital deployment also operates differently in the two cases. Established firms have pre-established deployment cycles of with semi-annual or annual frequency which entails elaborate planning. Small entrepreneurial firms, in turn, usually require a fast infusion of cash at the right moment, judged as appropriate by external private equity firms. Such flexibility is unlikely to be palatable to most established firms, and maybe the price paid is less radical innovation. Taking on high risk is not what large firms with a robust business model, established products and efficient distribution channels necessarily want to engage in.

\textsuperscript{8}At the same time, the more informal and flexible from an environment benefits innovation in small firms, allowing for better communication which in turn facilitates innovation. Large firms have become large by developing sales, manufacturing, and other organizational resources in a routinized fashion. All the highly efficient channels represent capabilities that make such firms highly sought after partners in an alliance with small firms.
Table 2 summarizes this discussion on the contributions small and large firms bring to the table as partners alliances. The resources put together by the two sides of an alliance are intended to be complementary, which is the source of the value creation of a partnership.

d) The resources of each partner

CE is about identifying new ways of doing business, developing new technologies, products, and processes, entering new markets, and, most importantly, devising new organizational forms. In today’s competitive environment firms have to be able to innovate along all these dimensions using proactive strategies.

Strategic alliances can greatly enhance the outcomes of CE. Interfirm cooperative arrangements like joint R&D or marketing agreements, joint-ventures, or minority stake alliances, provide the vehicles needed to materialize and experiment with new combinations of resources required to bring to the market new products and processes. The resource-based view of the firm emphasizes the presence of internal sources of perennial comparative advantage in firms. As such, this view clearly validates the use of strategic alliances in facilitating access to resources in the context offered by CE.

A key feature of entrepreneurship is the aggressive pursuit of growth opportunities. This effort attempts to overcome the inherent limitation represented by the current resources available to growth-oriented firms. The three major components of CE, innovation, strategic renewal, and corporate venturing, represent as many avenues to encounter new business opportunities while expanding. However, CE activities have significant resource implications, resulting almost always in the creation of resource gaps: the firm’s resource base needs to be augmented in order to take full advantage of new opportunities.

A resource gap represents the type and quantity of needed resources and may refer to financial, technological, human, and organizational resources. In entrepreneurial firms this gap
cannot usually be met by a simple reallocation of resources. Instead, filling resources gaps are tackled via market transactions, acquisitions, and strategic alliances. Tangible resources (e.g. physical, capital, financial) can be pursued via product, service, labour, and capital markets. Technological, knowledge, and organizational resources can be acquired via contract-based market transaction (e.g. licensing, consulting, etc.). Acquisition of another firm that has the needed resources is another way of bridging the resource gaps but the fact remains that most acquisitions fail to deliver the synergy sought through integration. Lastly, forging strategic alliances brings flexibility, cost and risk sharing among partners, and the much needed resources to meet resource gaps. Eisenhardt and Schoonhoven (1996) show empirically that more innovative firms tend to be associated to participation in alliances.

From the perspective of the resource-based theory, there are certain conditions or characteristics that resources need to have in order to enhance the firms’ value-creation potential. The resources need to be valuable, rare, imperfectly imitable, and imperfectly substitutable. More generally, the resources need to be heterogeneous and imperfectly mobile, and be able to impose ex ante and ex post limits to competition.

Each firm is idiosyncratic in terms of its mix of resources accumulated over time. It is this resource heterogeneity that fuels the search for alliances. However, the firm has to carefully amass superior, scarce resources in order to fare well in the alliance process and to preserve its competitive advantage over time. The larger the resource heterogeneity of partners, the larger the gains flowing from an alliance. At the same time, firms fearing opportunistic behaviour from potential partners may choose partners with a similar resource makeup, in order to better protect its resources. In this case, the benefits of an alliance are drastically reduced. In contrast, firms that are aggressive and willing to take risk will prefer a high degree of complementarity in their partners’ resources, reaping bigger rewards from alliances.
Imperfect mobility is a desirable feature of resources for firms entering strategic alliances because it insures that valuable resources cannot be easily bid away from the company. This leads to stabler alliances and sustainable comparative advantage for the firm. Imperfect mobility is obtained by focusing on relation-specific assets (e.g. site specificity, physical specificity, human asset specificity). Specific assets lead to lower coordination costs, effective cooperation, and significant trust between partners. However, asset specificity presents a high potential risk of opportunism since specific resources cannot be easily traded without significant loss of value. Firms fearing such risks may choose not to enter alliances or to use less specific assets, foregoing substantial benefits coming out of alliances.

e) The challenges faced by strategic alliances

Strategic alliances face significant management and operational challenges since they are based on top of a number of fault lines. These include: firm vs. group interest, short vs. long-term orientations, rigidity vs. flexibility in structure, differing firm goals and competitive environment, power differentials and asymmetric interdependence.

Alliances are seen as temporary commitments to be disposed of if the conditions that favour cooperation change. The calculus of cooperation vs. competition is different for each member of the alliance. The analysis is complex, with a multitude of factors playing a role, from factors internal to the firms, to intra-alliance factors, to those affecting inter-alliance competition, and finally to those factors present in the environment in which alliances compete. Non-cooperation has serious implications for SMEs since they are more likely to rely on outside resources to bring products and services to the market. SMEs need alliances the most but are also the most vulnerable since they often lack other lines of business to fall back on if their alliances fail.

The existence of multiple decision centres will lead to constant bargaining and class of interests, which may lead to paralysis or dissolution of the alliance. In other word, the alliance
mitigates some risks but creates a new set of risks. However, viable alliances have developed means to address challenges raised by incomplete contracts. While the firms remain independent, contributions are made continually by partners, which have limited control and share risks and benefits.

A particularly important challenge faced by firms contemplating setting up a strategic alliance is choosing a partner (Dacin et al, 1997, Das 2005, Das and Teng, 1998 and 2000, Miles et al, 1999). Since strategic alliances’ performance depends crucially on how well the particular characteristics of the partner firms fit together, it is essential for firm pondering a potential the decision to enter an alliance to perform a thorough partner analysis. This requires a joint assessment comprising both the market and the resources offered by the potential partner. A thorough evaluation would reveal important dimension of the would-be alliance, such as collective strengths and interdependencies (i.e. resource alignment), and help identify a good overall match with a partner.

f) What small and large firms get out of a strategic alliance?

Finally, then what does the literature tell us about the positive aspects for small and large firms from a strategic alliance? A study of 128 alliances between large and entrepreneurial firms in three US industries by Alvarez and Barney (2001) reveals interesting albeit not totally surprising findings. The small (or entrepreneurial) firm is defined as a firm with fewer than 150 employees that had been in existence for less than 5 years. In this sample the entrepreneurial firms had sales averaging $25 million while their large firm partners averaged $1 billion in sales. Large firms that are part of alliances with small firms gain access to new technologies and to state of the art engineering talent, together with excellent innovative capacity. Strategic alliances can offer legitimacy to small firms, together with access to distributional, marketing, and manufacturing
resources needed to commercialize its new technology. In addition, strategic alliances may constitute a vehicle to the financial capacity needed to bring a technology to market.

Alvarez and Barney’s main finding refers to the extent to which the two sides of an alliance benefit from it. While the potential gains from alliance are mutual, in some instances the small firms can suffer from it, and even endanger the survival of the firm. The key aspect of the success of the alliance seems to be the speed at which the large firm has gained access to the new technology representing the main asset brought in by the small firm. When this technology is the only resources contributed to the alliance by the small firm, most of the value created by the alliance is appropriated by the large firm.

The large firm need to study the products and processes associated with the new technology proposed by the small firm in order to successfully commercialize it (e.g. manufacture, market, and distribute it). This learning process is mostly one-sided, since it is difficult for the small firm to imitate the large firm’s organizational capabilities. The associated routines were usually developed over long periods of time during the growth process of the large firm. It is this asymmetry that leads to the imbalance in the benefits drawn from the alliance by the two parties. This mechanism is consistent with the resource-based view of the firm.

Once the large firm learns about the partner’s technology, it could elect to withdraw from, under-invest in, or shift resources away from the alliance, which would hurt the small firm. This danger constitutes the basis to the risks associated with joining an alliance by the small firm and may convince many a small firms to “go it alone”, which would prevent the benefits flowing from alliances to materialize (market failure occurs).

One solution to this issue from the point of view of a small firm that joins an alliance is to control somehow the rate at which the large firm learns about the technology. While this comes at a cost, delaying commercialization and diminishing the small firm’s cash flow early on, it
significantly improves the chances of keeping the alliance afloat. To alleviate those delays, the small firm can use elaborate (yet costly) contracts to put milestones in place and define specific terms and goals. Building their relationship on trust throughout is essential for both parties. However, the ideal strategy by the small firm, if feasible, is to bring a diversified set of resources to the table, either in terms of several available technologies or strong ability to produce a stream of new technologies. This would put the small firms on a more equal footing with the large firm, yielding the right incentives for the latter to continue to contribute to the alliance. This strategy comes at a cost as well, since the small firm has to make large early investments in R&D capabilities. The strategy is also consistent with the resource-based view of the firm.

Large firms also need to understand the dangers flowing from building an alliance with an entrepreneurial firm relying on a sole new technology as its contribution. Unless it enters the alliance attempting to expropriate the small firm, the large firm has to insure that its partner has or at least is capable of generating several technologies. In addition, it is beneficial for the alliance if the small firm has adequate management skills to learn from the large firm how to emulate organizational capabilities, and more generally, the skills needed to make an alliance successful. Another aspect that needs to be clarified early on is the preference by the small form to remain independent or not, and whether it intends to grow rapidly or not.

Smith et al (1991) look at inter-firm collaborative networks between a large variety of firms, including small and large firms, using a case study approach. The focus is on the contribution of individuals that are part of small or large firms and the often informal networks they are part of. These individuals are the entrepreneurs in the small firms, and the “intrapreneurs” in the large ones. Superimposed on these networks are those of the decision makers at the top level of each firm. The complexity of these networks makes it hard both to predict as well as to materialize the gains from collaboration.
IV. Case Studies and Results

There is a clear need for case studies approach here since the aim is to seek out information on business strategies. Some information on firm collaboration is available at a macro level (see data available from the Statistics Canada’s 2005 Innovation Surveys in Appendix B) but this paper seeks to study firms’ specific elements of strategic alliances. This kind of information is only really to be gleaned from a case study approach.

Selection Criteria for the Case Studies

This project examines strategic alliances (or partnership, relationships, linkages, collaborations) between a large firm (over 500 employees) and a small firm. The alliance may contain more than these two firms.

Requirements (must have):

- The small firm has to be Canadian owned and based in Canada, while the large firm can be foreign.
- The firms are independent (i.e. one does not have shares in the other company and joint ventures are excluded). That way we insure that the relationship is temporary, even though it can be long standing. The point is that since the firms are not linked via ownership, they have to work out an understanding. It is precisely this process our research project focuses on.
- The partnership should go beyond a simple seller-buyer relationship, i.e. we are not interested in cases, for example, where a small firm simply manufactures a component for a large firm. We are interested in richer collaborations, where the complementarity of skills, capabilities, and resources drives the relationship of the two firms.
Requirement (at least one aspect from the list below has to be present):

- temporary relationships/alliances/partnerships with a strong innovative and/or entrepreneurial component (i.e. there is an unambiguous newness aspect to the outcome of the collaboration)

- interfirm relation that is focused on the creation of new knowledge (technological or organisational) via interaction

- interfirm cooperation based on a collaborative transfer of knowledge (i.e. going beyond a simple license acquisition)

- partnership geared toward access to complementary resources (firms contributing diverse yet matching skills)

- relationships that facilitate product development and/or commercialisation (taking it to the market)

- special relationship with a supplier if linked to product development or improvement

The person responsible for the day-to-day management of the strategic alliance was interviewed in almost all cases. The exceptions include cases in which the person who set up the alliance was interviewed.

The questionnaire includes a large number of questions grouped in three categories. Examples of questions are presented below. While the task of going through all the questions appears daunting, most interviews were conducted in less than 30 minutes. Making the questionnaire available in advance and using an experienced interviewer insured the interviews were conducted in a reasonable time frame. All interviewees agreed to have the interview taped,

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9 The full questionnaire is available from the author upon request.
although a majority of them requested confidentiality assurances. Here are examples of questions/issues addressed in the questionnaire.

1. **Dimensions defining the nature of alliances (some examples)**

   - Characteristics of the company (industry, main products/services, sales, number of workers, export activity, perception of the market it operates in – competition level, etc.)
   - Participation in strategic alliances (last ten years, last five, exclusive with foreign/domestic companies, how many still active)
   - Objectives for participation in alliances: pick several reasons from a list, and rank their relative importance.
   - Types of partners used: competitors, suppliers, clients, distributors, etc. Who are the most suitable partners? What are the criteria used to select partners?
   - Performance of alliance (process): life span, barriers to formation, risks, difficulties, stages, lessons learned, cooperation/competition balance, etc), decision making (has a formal assessment of the desirability of joining an alliance been done – e.g. cost-benefit analysis).
   - Impact of past and current alliances (including ranking): build firm’s knowledge base, etc.

2. **Specific questions targeting small-large relationships, as opposed to general alliances**

   - Who initiates the talks on building a SA?
   - What defines a good match between a small and large firm?
   - Are small firm – large firm alliances inherently more unstable than large-large or small-small alliances? Why?
   - What kind of role do contracts play in supporting a SA? Are there significant problems with enforcing such contracts?
   - How important is the learning associated with being a member in a SA?
3. Characteristics of Resources

- What are the strategic resources of the partners?
- Why are these resources “strategic”? What are their characteristics?
- Are these resources substitutable or imitable?
- How are the knowledge assets dealt with? Is there a danger that knowledge in small firms will be expropriated by the large firm? What measures protect against this?

Key Findings

The following results are preliminary findings that are quite illustrative of both the benefits flowing from strategic alliances and the issues encountered by the partners. The case studies completed identified a number of benefits of these arrangements that were also evident in the literature:

- By combining resources that are complementary, alliances allow the partners to overcome their respective internal and external constraints.
- The source of value creation inside an alliance comes from the fit between the different resources that the small and large firms bring as partners.
- Increasing revenue is not the number one reason for engaging in strategic alliances. Instead, accelerating market access and reducing innovation costs represent top reasons for joining a strategic alliance.
- There is significant evidence that the ability of firms to acquire and disseminate new knowledge is much more important than previously thought and systemic and strategic learning seem to be at least as important as technical learning.
- Virtually all interviewed firms expect strategic alliances to play an increasing role in the future, recognizing them as flexible vehicles bringing about tremendous benefits.
At the same time those interviewed emphasize the challenges faced by alliance partners.

- Important concerns of alliance members include heavy dependence by the small firm and potentially opportunistic behaviour by the large firm.
- Both small and large firms are aware of the risk of losing control of its intellectual property while engaged in alliances. However, evidence shows that small firms invest comparatively more in mitigating this risk, both at the time of setting up the alliance and during its unfolding.
- Strong interpersonal relationships and trust and compatibility of business culture between partners appear to be key success factors in an alliance.
- Small firms may be more risk averse and respondents noted that at times the benefits from strategic alliances may be bypassed because small firms may over-emphasize the risk of joining an alliance.

Respondents when asked also provided views on a possible government role in facilitating strategic alliances, specifically:

- Both small and large firms would welcome government efforts to facilitate greater inter-firm interaction through such mechanisms as creating opportunities for the firms to meet and by providing actionable intelligence in developing markets.
- Biotech firms specifically mentioned the government review process of products as an important cause for alliance failure. While the review necessarily includes the unsuccessful projects and the dissolution of narrowly focussed alliances, more transparency would be helpful.

The information contained in these cases of strategic alliances provides some policy implications. Greater understanding about the types of government support needed would help policy makers facilitate alliance formation and assist members in further developing such
partnerships. One promising area would be to examine the organizations that acted as intermediaries and facilitated the contacts between the small and large firms. Such efforts can reduce the loss from missed partnering opportunities and help to promote economic growth.

While the case studies cover a wide variety of industries, there is insufficient sampling to permit analysis of any industry-specific concerns related to alliances. The work suggests a more in-depth analysis of the value of networks and the role of intermediaries, including an assessment of the existing models, is needed to better understand the role of government and the precise mechanisms that can be utilized in these areas.

V. Conclusions

This study makes a number of specific contributions to the burgeoning literature on strategic alliances. First, it focuses on alliances between small and large firms, recognizing the tremendous scope of such collaborations. The complementarity of resources characterizing such interfirm cooperation allows for mutual help in surpassing internal and external constraints. Second, this study provides evidence showing that organization learning is much more important than previously thought. Specifically, systemic and strategic learning seems to be at least as important as technical learning. Third, this paper uncovers via case studies some of the main fault lines in strategic alliances between small and large firms. It highlights important concerns such as asymmetric dependence and opportunistic behaviour. Fourth, it finds that both small and large firms welcome governments to do more to facilitate their interaction.
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### Table 1: Reasons to join strategic alliances

<table>
<thead>
<tr>
<th>Category</th>
<th>Reasons</th>
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| 1. Risk reduction | Lower asset exposure for SMEs  
| | Accelerate access to markets  
| | Lower total capital investment  
| | Reduce fixed cost  
| | Diversify portfolio  
| | Reduce environment uncertainty  
| 2. Economies of specialization, scale and scope | Use complementary of competencies  
| | Reduce innovation costs  
| | Lower average cost via larger volume  
| | Facilitate product development  
| | Economize on transport costs  
| | Gain configuration flexibility  
| | Capitalize on location externalities  
| 3. Complementary technologies | Capitalize on technological synergy  
| 4. Co-opting or blocking competition | Block competition via a defensive SA  
| | Increase costs of rival via an offensive SA  
| | Improve strategic position  
| | Deter market entry or exit  
| | Move competition at the alliance level  
| 5. Overcome a government-mandated barrier | Operate as a “local” entity because of local partner  
| | Satisfy local ownership requirement  
| | Conform to legal/regulatory requirements  
| 6. Vertical quasi-integration | Gain access to materials, technology, labour, capital  
| | Gain access to distribution channels  
| | Gain access to information about markets  
| | Draw on existing marketing establishments  
| | Reduce TCs by using an appropriate governance mechanism  
| 7. Learning | Learning via interaction  

Table 2: What each side brings to the table

<table>
<thead>
<tr>
<th>Resource-based theory</th>
<th>Large firm</th>
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<tbody>
<tr>
<td><strong>Small firm</strong></td>
<td><strong>Large firm</strong></td>
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<tr>
<td>Technological inventiveness</td>
<td>Large R&amp;D budgets</td>
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<tr>
<td>Human Resources</td>
<td>Financial resources (non R&amp;D)</td>
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<td>Human resources</td>
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<tr>
<td>Specialized skills</td>
<td>Diversity of skills</td>
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<td>Organizational</td>
<td>Organizational resources:</td>
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<td></td>
<td>marketing</td>
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<td>Flexibility</td>
<td>manufacturing</td>
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<td></td>
<td>distribution channels</td>
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<tr>
<td>Closeness to client base</td>
<td>access to export markets</td>
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<td>intellectual property protection</td>
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<tr>
<td>Specialized knowledge of markets (niches)</td>
<td>expertise</td>
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<td></td>
<td>Management capacity</td>
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<tr>
<td>Managerial culture focusing on the disruptive effect of knowledge</td>
<td>Managerial culture focusing on efficiency</td>
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Transaction costs theory
Appendix A

Theories framing cooperative behaviour can be divided in three broad areas: economic, organizational, and cooperative behaviour ones. A short description of each is offered below.

I. Economic theories

1. Strategic management theory (market power)
2. Transaction cost theory
3. Resource-based theory
4. Agency theory
5. Game theory
6. Real option theory

1. Strategic management theory (market power)

It originates with the publication of Competitive Strategy (1980) by Michael Porter. Paradoxically, competitive intensity is addressed with “positioning” and cooperative behaviour. The latter is a better instrument to achieve greater market power than, say mergers or acquisitions, and leads to better profitability. A host of other researchers then moved away from Porter’s atomistic view of the firm and toward the “keiretsu” approach to developing market power (“island of planned coordination in a sea of market relations”).

2. Transaction cost theory

The gist of TC theory: cooperative behaviour leads to cost reductions via different methods of organizing transactions. TCs are the costs of establishing and maintaining property rights over resources (e.g. monitoring transactions, negotiations, etc). TC theory looks at the choice between internalizing a certain economic activity and performing it over markets. Oliver Williamson advocated TC theory in the 1970s but the fundamental concepts were developed by Ronald Coase (1937, 1960). Williamson emphasized asset specificity and the recurrent nature of transactions as key factors affecting the choices concerning governance. The structures defining governance choices (e.g. joint ventures) are deemed as intermediaries between markets and hierarchies. While fundamentally sound and intellectually appealing, TC theory was criticized because it ignored factors important to the business decision maker, such as risk, synergy, and effectiveness, and because it adopts a static approach to cooperation.

3. Resource-based theory

Unlike the perfect competition story, this theory holds that competition cannot always drive the rents to zero. Instead, a firm can sustain a competitive advantage by configuring its tangible and intangible assets in a way that is difficult to imitate, or by acquiring resources, skills and capabilities durable yet not perfectly transferable or replicable. This theory can be couched in TC terms, with the sustainable competitive advantage thought of as a specific asset.
This theory focuses on the ability of principals (shareholders) to ensure the agents (management) are fulfilling the objectives of the principals. Agency theory looks at mechanisms constraining the agents’ self-serving behaviour, such as contracts and other incentives, with the goal of mitigating the asymmetry of information between principals and agents. Agency theory implies that both the principal and agent can be viewed as partners to a cooperating venture that need to clarify the split of returns from effective cooperation and need to put in place systems to share information and reduce opportunism.

5. Game theory

This theory looks at predictions of outcomes from games which involve several players whose interests are interconnected. It can be applied to a large variety of situations, such as sport, financial, and military affairs. It has started by focusing on non-cooperative games but quickly demonstrated that cooperation can emerge in a world of self interested players without a central authority, more likely in the case of repeated interaction. Short term non-cooperative dominant strategies yield to cooperative ones in repeated games with indeterminate end. Game theory makes valuable contributions to the analysis of cooperative strategies by revealing under what conditions cooperation is rewarding or undermined.

6. Real option theory

Standard finance theory states that no resource commitments should be made unless absolutely necessary, since the future will be different from that expected. Keeping one’s option open seems like a sensible strategy. In addition, investment in a portfolio of options helps diversify risk. For example, “compound options” offer, if exercised, access to further options, which in turn render more options. “Learning options” are those where the holders makes small investments to learn about new opportunities (e.g. specific technologies). Cooperation then serves to generate a portfolio of low-risk options which in turn open up further options down the road.

II. Organization theory

1. Resource dependence theory
2. Organizational learning
3. Social network theory
4. Ecosystem view
5. Structurationist perspective

1. Resource dependence theory

Firms are not internally self-sufficient and therefore require resources from the environment. To this degree, they are dependent on the environment in which they transact. Consequently, cooperation may ensue in order to provide firms with access to financial resources, expertise, skills, processes, or markets. Further, firms try to reduce uncertainty in their environment by cooperating with prominent parts of it, yet this attempt in itself will represent a source of additional risk (e.g. the danger of opportunism from the partner). Resource dependence theory is
consistent with the resource-based theory. The latter recognizes that firms’ performance depends to some degree on unique capabilities (core competencies) and sustained competitive advantage, and these can be leveraged within a cooperative setting in which are traded for access to capabilities held by other firms (e.g. knowledge, technologies, etc.). It is useful to note that there is a trade-off at play here: the firm accepts some loss of autonomy while entering cooperative enterprises, but gains in terms of improving its competitive edge.

2. Organizational learning

This learning refers to the ability of firms/organizations to acquire and disseminate new knowledge that can enhance their future performance. Of course, there is always the danger that certain organizational structures, or cultures, or vested interest will pose barriers to learning. There are several types of learning: routine learning (incremental), reframing learning (more fundamental reassessment), and secondary learning (development of learning mindsets/habits). An alternative classification (more intuitive) is technical, systemic, and strategic. A different breakdown of learning can refer to the collaborative type (transfer of knowledge and skills from the partner firm), and learning about the complex management of cooperative ventures.

3. Social network theory

The definition of a network is somewhat ambiguous, pretty much as that of a supply chain. Networks are pictured as a hybrid form situated on the spectrum between markets and hierarchies. Social networks are defined as persistent and structured sets of autonomous players who operate on the basis of implicit and open-ended contracts. Such contracts are socially rather than legally binding. The actions of actors that are part of the network are explained in the context of their position in the network seen in dynamic terms. This theory emphasizes social links by examining their formation, evolution, performance, and performance consequences.

4. Ecosystem view

Related to social networks, the ecosystem perspective views organizations/firms as members of a community of suppliers, producers, competitors, and other stakeholders that seek mutual support and jointly progress toward a shared vision. The incentive to cooperate is embedded in the perceived value of generating economies of scale and scope, and a reinvestment of return in this ecosystem to facilitate the arrival of future generations of products and services. The collapse of traditional industries gives rise to ecosystems with loosely defined boundaries. A firm’s profitability, in turn, would depend on its ability to manage relationships in this ecosystem, to position itself inside it, and to contribute to the competition with similar constellations. Key idea here, somewhat similar to the keiretsu: competition takes place not among firms, but among constellations of organization. Within its own constellation, the firm is busy creating a reputation for creditworthiness, reliability, predictability, and designing know-how. In a nutshell, the constellation creates the setting for successful collective action, taking cooperation to a different level. Not unlike market power theory, the ecosystem view implies that competitive rivalry is enhanced, rather than being inhibited. Like-minded groups of firms have better chance at catching up to industry leaders, narrow competitive gaps, and bring about less differentiation among competing firms.
5. Structurationist perspective

A relative newcomer, this view originates in a sociological approach to the study of alliances and points to the impossibility of meaningfully describing structure in the absence of considering strategic choice. Action emerges out of social structure and at the same time reproduces or transforms these structures.

III. Cooperative behaviour

1. Culture
2. Trust
3. Commitment

1. Culture

Organization culture and leadership, together with the role of national culture in the workplace are the main topics here. Since international strategic cooperation is more and more prevalent nowadays, both aspects need to be taken into account in order to set realistic expectations and putting in place appropriate operating rules governing communication and performance measurement. National culture appears to reside mostly in values, while corporate culture is lodged primarily in practices. Homogeneity is a measure of strength, while heterogeneity is a potential source of weakness. However, companies originating in different cultures have a lot to gain by learning from each other, providing that they appreciate their differences and do not need to spend a lot of resources trying to understand each other.

2. Trust

Trust and goodwill have been found to be vital in alliances of all kind by enhancing communication, stabilizing the relationship, and help avoid conflict by increasing partners’ tolerance for each other. While trust facilitates cooperation, it is not a necessary condition. However, trust is a social norm that lessens the need to use hierarchy to attenuate opportunism. As such, trust lowers transaction costs and increases investment returns, while enhancing the innovation and learning.

3. Commitment

Commitment is different than trust: one can be committed to a partner it depends on, but not trusting him; one can trust completely a partner but at the same time be committed only to a limited degree, preserving viable alternative courses of action. Commitment can be signalled in several ways: making large capital investment, sticking with the deal even when the going gets tough, disclosing proprietary information, etc.
APPENDIX B: Percentage of plants that co-operated on innovation activities with other firms or institutions and reasons important in determining involvement

Canada, innovative plants

<table>
<thead>
<tr>
<th>Plants in co-operative arrangements</th>
<th>Development of innovation</th>
<th>Commercialization of innovation</th>
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<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Accessing new markets</td>
</tr>
<tr>
<td></td>
<td>Sharing cost of developing innovations</td>
<td>Accessing research and development (R&amp;D)</td>
</tr>
<tr>
<td>All manufacturing</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>Food manufacturing and beverage and tobacco products</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>Textile mills and textile product mills</td>
<td>24</td>
<td>41</td>
</tr>
<tr>
<td>Clothing manufacturing and leather and allied products</td>
<td>18</td>
<td>48</td>
</tr>
<tr>
<td>Wood product manufacturing</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Paper manufacturing</td>
<td>27</td>
<td>50</td>
</tr>
<tr>
<td>Pulp, paper and paperboard mills</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Printing and related support activities</td>
<td>18</td>
<td>58</td>
</tr>
<tr>
<td>Petroleum and coal products manufacturing</td>
<td>35</td>
<td>46</td>
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<tr>
<td>Chemical manufacturing</td>
<td>23</td>
<td>54</td>
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<tr>
<td>Plastics and rubber products manufacturing</td>
<td>24</td>
<td>37</td>
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<tr>
<td>Non-metallic mineral product manufacturing</td>
<td>23</td>
<td>49</td>
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<tr>
<td>Primary metal manufacturing</td>
<td>30</td>
<td>58</td>
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<tr>
<td>Fabricated metal manufacturing</td>
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<td>43</td>
</tr>
<tr>
<td>Machinery manufacturing</td>
<td>18</td>
<td>53</td>
</tr>
<tr>
<td>Commercial and service industry machinery</td>
<td>33</td>
<td>81</td>
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<tr>
<td>Computer and electronic product manufacturing</td>
<td>33</td>
<td>68</td>
</tr>
<tr>
<td>Computer and peripheral equipment manufacturing</td>
<td>22</td>
<td>90</td>
</tr>
<tr>
<td>Navigational, measuring, medical and control instruments</td>
<td>44</td>
<td>67</td>
</tr>
<tr>
<td>Electrical equipment manufacturing</td>
<td>22</td>
<td>56</td>
</tr>
<tr>
<td>Transportation equipment manufacturing</td>
<td>31</td>
<td>58</td>
</tr>
<tr>
<td>Aerospace product and parts manufacturing</td>
<td>61</td>
<td>57</td>
</tr>
<tr>
<td>Furniture and related product manufacturing</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>Information and communication technology (ICT)</td>
<td>34</td>
<td>70</td>
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</tbody>
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Note: The figures in bold are above the average for all manufacturing in their category.
HOW TO IDENTIFY AND ASSESS ENTREPRENEURIAL COMPETENCIES IN THE CONTEXT OF FRENCH MICRO-ENTERPRISES

We consider that the competitive advantage of small firms partly results from the competence of the entrepreneur to promote his project. Our purpose is to reply these questions: What competences are perceived by the entrepreneurs and institutional as necessary for small company manager? How can we translate these definitions into a self-diagnosis tool?

Our study is a continuation of the work done by Chandler and Jansen (1992) and Lorrain, Belley and Dussault (1998). Chandler and Jansen (1992) proposed the typology most often encountered in literature on entrepreneurship, and which had been approved by 134 SME managers: entrepreneurial, managerial and technical competencies. We present the main approaches to the subject of individual and entrepreneurial competences.

We propose first results of qualitative research carried out within the framework of a research project involving entrepreneurs, institutional management and academics: the Lorraine Managers’ Club. Qualitative data is gathered mainly through observation, individual and collective interviews. Concretely, our expert group is made up of 5 micro-enterprise managers, 6 management science researchers and 4 institutional representatives of the Regional Chamber of Trade, the Regional Professional Craftsmen’s Union and the Higher Institute of Trade.

The first results that we obtained concern 7 generic competences deemed necessary for the managers of small companies, irrespective of their area of business. We underline that the aim of this tool is perceptual measurement rather than objective evaluation of the competences of entrepreneurs. This raises the question of whether the mental image that entrepreneurs have of their competences matches their real competences. However, we do believe that perception-based competence measurement is a delicate issue, conditioned by the perceptions of the managers (Bandura, 1982; Spencer and Spencer, 1993) and necessitating considerable empirical resources (Lorrain et al, 1998).
1. Introduction

Opportunity identification is considered by many as the first step in the entrepreneurial process (Baron & Shane, 2006; Baron, 2004; Shane & Venkataraman, 2000). But from whence to entrepreneurial opportunities come? *Entrepreneurial opportunity* has been defined by some as the possibility to introduce innovative goods or services to a marketplace (Gaglio, 2004; Singh, 2000). From this perspective, an opportunity can only be considered an entrepreneurial opportunity if it is innovative or radical to a society or industries (Gaglio & Katz, 2001; Schumpeter, 1934; Shane & Venkataraman, 2000; Smith, Matthews, & Schenkel, 2009). By contrast, others have defined entrepreneurial opportunities simply as situations where “pure profit potential” exists (e.g., Kirzner, 1973) through the introduction of imitative goods or services generated by the earlier errors of other marketplace participants. Additionally, they can be seen as “arising from unanticipated independently-caused, changes in underlying market circumstances” (Kirzner, 1997: 7).

While debate clearly continues to focus on the issue of whether innovation (e.g., Schumpeter, 1934) or firm creation (e.g., Gartner, 1989) reflects the distinctiveness of entrepreneurship as a research domain, the focus of the debate has changed in recent years. Specifically, researchers have increasingly observed that a fundamentally important issue in its own right revolves around the nature or degree of opportunity novelty as a basis for firm founding (Bhave, 1994; Cliff, Jennings, & Greenwood, 2006; Davidsson & Wiklund, 2001; Shepherd, Douglas, & Shanley, 2000; Zimmerman & Zeitz, 2002). This is an important issue for research to inform because even though innovation can be a source of competitive advantage (Barney, 1991; Porter, 1991; Wernerfelt, 1984), not all firms successfully founded and sustained by entrepreneurs are based on innovative opportunities. For example, simple observation of the modern growth in franchise-based business ventures (e.g., Jiffy Lube, Valvoline, EZ Lube, etc.) suggests that the number of individual firms founded on the basis of imitative opportunities in a market is likely to
disproportionately outweigh those founded on the basis of innovative opportunities. Empirical research findings that distinguish imitative from innovative opportunities appear to support such anecdotal observation. For example, Aldrich (1999) found evidence suggesting the majority of new firms are actually founded simply by reproducing or imitating what has been done before.

Despite the contributions and insights of prior research, little work has explicitly sought to advance our understanding of the processes that bring about the differences between imitative and innovative opportunities. For example, Carland et al. (1984) have noted that innovation is a key factor that helps distinguish entrepreneurial opportunities from simple arbitrage opportunities (Carland, Hoy, Boulton, & Carland, 1984). Similarly, Shane (2001) focused on the impact that prior knowledge had on opportunity recognition by entrepreneurs. Yet as recent investigations illustrate (e.g., Fiet & Patel, 2009), empirical researchers have focused on the mechanisms influencing the pursuit of entrepreneurial opportunity more universally, rather than distinguishing between those that are innovative and those that are imitative in nature. As a result, insight into the nature and origins of opportunity and its relationship to the nascent firm founding process remains limited by the possibility that important contextual differences exist (Ucbasaran, Wright, & Westhead, 2006) and systematically differ across opportunities. In short, the need for research that focuses more explicitly on the nature and variation of entrepreneurial opportunities is highlighted (Shepherd & DeTienne, 2005; ).

We seek to address this gap by investigating four research questions designed to build on prior work (i.e., Corbett, 2005; Dimov, 2007; Shane & Venkataraman, 2000; Shane, 2001; Smith, Matthews, & Schenkel, 2009) emphasizing a more prominent role of the nature of the entrepreneurial opportunity. First, does the type of opportunity identification process (i.e., alertness versus systematic search) used by the entrepreneur impact type of opportunity (i.e., imitative versus innovative) likely to be identified? Second, does the heterogeneity of prior knowledge used by the entrepreneur influence the type of opportunity
identify by the entrepreneur? Third, does the combination of identification process type and heterogeneity of an entrepreneur’s prior knowledge influence the type of opportunity identified? Fourth, do these relationships differ between technology-based and nontechnology-based nascent venturing efforts? Our proposed model is as follows:

<INSERT FIGURE 1 ABOUT HERE>

This paper proceeds in the following manner. First, we review the literature on entrepreneurial opportunity identification processes with respect to two schools of thought that appear dominant in the entrepreneurship literature. We then review the literature focusing on entrepreneurial opportunities, paying particular attention to the innovative versus imitative distinction it reveals. This is followed by a discussion on how the hypotheses were tested based on data obtained from the Panel Study of Entrepreneurial Dynamics (PSED). The paper concludes with a discussion of our results and suggested future research directions.

2. Literature Review

2.1 Opportunity Identification Process

The purpose of this research is not to explore implications of the two types of opportunity identification processes – passive search and systematic search\(^1\) per se. Rather, it is to determine whether the use of systematic search or the process of entrepreneurial alertness in finding information systematically leads individuals to identify opportunities that are characterized as more innovative in nature. We now turn attention to a discussion of two broad schools of thought on how individuals identify entrepreneurial opportunities.

2.1.1 Systematic Search

One opportunity identification school of thought suggests that the search for information about unknown venture ideas can be replaced with the search for known information sources (Fiet, 1996). Scholars subscribing to this school of thought suggest that discovery of information about an opportunity is dependent on an entrepreneur’s prior specific knowledge. Proponents of this view further suggest that the use of a systematic search of information within an individual’s consideration set - grouping of information channels that emits signals that may indicate a potential discovery (Fiet, 2002) - might lead to a greater chance of discovering information within that particular consideration set than discovering information outside one’s consideration set (Patel & Fiet, 2009).

While systematic search research has yielded important insights into the opportunity identification process, a number of researchers have suggested that it is impossible to search systematically for unknown discoveries if the search domain itself is unknown (Kirzner, 1997; Kaish and Gilad, 1991). This argument is based on the idea that in an unbounded search domain, no optimal solution for which search can focus exists. Proponents of the systematic search perspective address this argument by suggesting that a consideration set approach restricts a person’s search domain to his/her prior knowledge, which in turn makes a the search for information possible as it is based on what the person possesses, rather than on a body of shared and commonly agreed upon information by market participants.

2.1.2 Passive Search
A second opportunity identification school of thought is based on Kirzner's early conceptualization of alertness, which is predominantly considered an economics-based perspective. In this work, Kirzner defined “alertness” as “the ability to notice without search opportunities that have hitherto been overlooked” (Kirzner, 1979: 48). Interestingly, his conceptualization does not suggest that individuals identify opportunities by pure accident. Rather, it suggests the notion of opportunity discovery through alertness is somewhere between that of deliberate search and that generated by pure luck (Kirzner, 1997), reflecting
what can be called *passive search*. While in the mode of passive search, the entrepreneur is receptive, but at the same time, not engaged in a formal, systematic search process (Ardichvili, Cardozo, & Ray, 2003). In other words, it is consistent with the proverbial idea that “chance favors the prepared mind”.

Like other Austrian economists (e.g., Hayek, 1945; Mises, 1949), Kirzner’s perspective suggests that opportunities exist at least in part because different people have access to different information in the form of facts, knowledge or data (Kirzner, 1997). Because differential access is likely to result in the possession of incomplete information by any one individual, it is also likely to lead to individuals making errors in the form of misallocated resources in the market. Some people rightly recognize that resource misallocations exist. These people then obtain the resources, recombine them, and exploit them in more efficient and effective uses (Casson, 1982).

The review above suggests that while both these perspectives (passive and systematic search) emphasize the importance of information access, they differ fundamentally from earlier work in that they suggest how individuals gain access to and use information could in turn lead to differences in the identification of an entrepreneurial opportunity.

### 2.2 Entrepreneurial Opportunities

Researchers take different views toward the nature of opportunities, which in turn suggests the potential for differences to exist with respect to how individuals are likely to come across them. Broadly, these views can be characterized as reflecting three schools of thought. The first view reflects the idea that opportunities reflect a physical tangibility that individuals can recognize. This view operates under the assumption that the source of demand and the source of supply readily exist but are unconnected by the existing market price mechanism. According to this school of thought, individuals recognize that an unmet need exists between existing sources of both supply and demand, and that this unmet need can be exploited. Because sources of both supply and demand already exist, exploitation of these types of
opportunities often described simply as taking the form of arbitrage (Alvarez & Barney, 2008; Gregoire, 2005; Venkataraman & Sarasvathy, 2001).

The second view reflects the idea that opportunities are created by individuals (e.g., Schumpeter, 1934). This view assumes that neither the source of supply nor demand exists, thus rendering the existence of a connection via the market mechanism impossible at the outset of the exploitation process. According to this school of thought, both supply and demand have to be created first, and then taken advantage of by individuals (i.e., entrepreneurs) to create opportunities for financial return (Venkataraman & Sarasvathy, 2001). In sum, the exploitation of these types of opportunities often described as taking the form of creative (Dimov, 2007) and development oriented (Ardichvili, Cardozo, & Ray, 2003) efforts on the part of the entrepreneur.

The third view considers the idea that opportunities reflect a physical tangibility in part, but also require the discovery or identification of additional elements that require action by individuals to bring into existence. This view operates under the assumption that either the source of demand or the source of supply is unknown (but not both) and unconnected by any market mechanism as a result. According to this school of thought, an individual discovers or identifies either a novel way to serve an existing market need, or discovers or identifies a new market that could be satisfied with an existing means of supply (Sarasvathy, 2001). This perspective shares qualities of the recognition and creativity views in that it acknowledges both identification aspect of existing resources, as well as the need to create or develop a corresponding connection between existing and potential uses in the marketplace over time (Ardichvili, Cardozo, & Ray, 2003: Dimov, 2007; Kirzner, 1997).

This review suggests that the existence of entrepreneurial opportunities can be conceptualized categorically those of either an imitative or innovative nature though such a dichotomy is rarely if ever expected to be observed in practice. Rather, in practice these ideal types are more likely to reflect
opposing ends of a continuum (Samuelsson and Davidsson, 2008; Weber 1947). Imitative opportunities can be seen as those that represent the existence of gaps and mismatches in information across market participants that could be profitably exploited (Kirzner, 1979). These imitative opportunities stem from changes in supply and demand which are in turn brought about by market inefficiencies (Aldrich & Martinez, 2001; Aldrich, 1999; Amason, Shrader, & Tompson, 2006; Kirzner, 1973; Shane, 2003). These opportunities are associated with routines and competencies that vary slightly from those of existing, similar ventures (Aldrich & Kenworthy, 1999; Aldrich & Martinez, 2001). By contrast, innovative opportunities can be conceptualized as those that evolve largely from creative human action coupled with changes in technology, political structure, regulatory environment, and social/demographic environments (Schumpeter, 1934; Shane, 2003). Research suggests that a hallmark of innovative opportunities is that they break away from existing knowledge and information streams (Amason et al., 2006; Shane, 2003), leading to the creation of products or services that are significantly novel or different from other existing products, services, or ventures.

3. Hypothesis Development
3.1 The Relationship between Opportunity Identification Process and Opportunity Type
Studies suggest that constrained, systematic search is focused on the search of known information sources, rather than a search for unknown venture ideas (e.g., Fiet, 2007). According to this information-based perspective, the search for information is constrained by an individual’s bounded rationality, as well as his/her prior knowledge. It suggests that entrepreneurs make use of existing informational channels – sources of signals (current information that changes a person’s ideas about future state) (Fiet, 1996; Fiet, 2007) to search for information. An underlying rationale of this school of thought is that opportunity identification would depend on “a fit between an entrepreneur’s specific knowledge and a particular venture idea” (Fiet, 2007: 5). This means that an individual must “identify domains in which he or she possesses prior, specific knowledge, create a set of information channels with a high probability of finding informative
clues of commercial potential, craft a search strategy, evaluate signals, and develop decision rules” (Fiet, Norton, & Clouse, 2007: 330). DeTienne and Chandler (2004: 244) further suggest that “search is envisioned as a sorting or winnowing through already existing opportunities and human creativity is not theorized to play a major role”.

The above discussion suggests that entrepreneurs who utilize a systematic search process to identify opportunities would be disproportionately attuned to information channels and signals related to their prior specific knowledge. Specifically, individuals who have only prior specific knowledge about a specific domain might miss information signals related to the broader domain itself, but not those relevant to potential entrepreneurial opportunities within the domain (Chang & Burke, 2007; D'Souza, 2009). Additionally, prior knowledge could lead to the entrepreneurs relying on biases such as neglect of probability (ignoring relevant information), framing effects (decisions being affected by irrelevant information), and anchoring (giving excessive weight to an unimportant but salient information) (Kahneman, Slovic, & Tversky, 1982; Nisbett & Ross, 1980; Sherman & Corty, 1984), which could in turn lead to the identification of opportunities that are of an imitative nature (D'Souza, 2009). Accordingly, we expect:

\[ H1a - Systematic search will be positively associated with the identification of imitative opportunities. \]

Research focusing on cognitive processes, by contrast, suggests a person’s mental models help direct and guide attention and information processing for specific situations that they encounter (Gaglio & Katz, 2001). Kaish and Gilad (1991), for instance, proposed and found empirical support for their hypothesis that individuals who did not search systematically for opportunities were able to position themselves in the flow of information so as to increase the probability of identifying opportunities (Gaglio & Katz, 2001). Similarly, other researchers have found that passive search, helps entrepreneurs overcome problems related to the newness of a product or service, as well as problems related to distribution of
information in situations where new technology is being introduced or new markets are being created (Baron & Markman, 1999). Gaglio and Katz (2001) further suggest that individuals employing alertness to identify opportunities not only have access to new information, but also utilize this information in a different way than do individuals who do not employ this process. In short, these findings seem to suggest a positive relationship between passive search and innovativeness. Accordingly, we expect:

\[ H1b \quad \text{Passive search will be positively associated with the identification of innovative opportunities.} \]

3.2 The Relationship between Prior Knowledge Heterogeneity and Opportunity Identification Process

In the field of entrepreneurship, prior knowledge has been studied as a form of human capital that often reflects the individual’s level of formal education, startup experience, work experience, and managerial experience (Cohen & Levinthal, 1990; Kim, Aldrich, & Keister, 2006; Schenkel, 2004). Theory suggests that not only does prior knowledge lead to the generation of business related skills (Boden & Nucci, 2000; Kim et al., 2006), but that people with prior knowledge of operating in a particular industry have an “edge” over people who do not have that specific industry information in identifying opportunities (Shane, 2000, 2003). This suggests that certain specific prior knowledge is necessary for the identification of at least some opportunities to occur (Dimov, 2003).

Prior knowledge has also been shown to lead to access to collective forms of capital (i.e., social and financial), such as the development of better relations with suppliers and customers (Kim et al., 2006). Further, research suggests that diverse elements of knowledge, when brought together, often lead to new combinations (Campbell, Marsden, & Hurlbert, 1986; Granovetter, 1973; Singh, 2000), and by extension new means – end frameworks. Paralleling such observations, this suggests that the identification of opportunities would be influenced positively by the heterogeneity of a person’s prior knowledge, at least in part, because it would increase the odds that both the tacit and explicit elements of knowledge will enter
into a potential nascent entrepreneur’s thinking to stimulate new means – end connections. Therefore, we
expect:

\textit{H2a} – An entrepreneur’s prior knowledge heterogeneity will influence the type opportunity identified
in such a way that more prior knowledge heterogeneity will be positively associated with
the identification of innovative opportunities.

\textit{H2b} - The relationship between the entrepreneurs’ opportunity identification process and the type
of opportunity identified will be moderated by the entrepreneur’s prior knowledge heterogeneity.

3.3 \textit{Influence of Technology Orientation}

Studies focusing on nascent entrepreneurial activity often make the assumption that prior
knowledge and opportunity identification process will have a universally consistent impact on the
opportunity identification process across all entrepreneurs (e.g., Patel & Fiet, 2009). Yet there is evidence
to suggest that entrepreneurs are not a cohesive group and that much can be gained by considering the
impact of these antecedent relationships across different contexts (Ucbasaran, Westhead, & Wright, 2001).

As suggested earlier, the passive or systematic way in which entrepreneur’s gains access to
information is expected to play an important part in the type of opportunities identified. Systematic search
for information is expected to lead to the accumulation of knowledge within a set paradigm. When dealing
with technology based venturing efforts, this knowledge would include information about existing and
emerging technologies along with potential market opportunities (Shane, 2000). However, individuals who
engage in a systematic search for information in a particular domain might at the same time be prone to
miss information generally related to the domain, but not specifically within the domain (Chang & Burke,
2007). Research has indeed found that individuals with knowledge about a particular domain do not always
engage in a thorough search for additional information because they take their knowledge for granted
(Chang & Burke, 2007; D'Souza, 2009), and that they rely on heuristics and are swayed by biases to a
large. Collectively, this would seem to suggest that individuals with domain specific knowledge would be
likely to gather information related to that domain as opposed to broader domains, and that such a leaning would be more likely to result in the identification of opportunities that are imitative in nature.

**H3 –** The relationship between the entrepreneurs’ opportunity identification process and the type of opportunity identified will be moderated by the technology orientation of the venture.

Liao and Welsch (2005) note that technology-based entrepreneurial activity is likely to be associated with greater emphasis on knowledge accumulation and learning than nontechnology-based entrepreneurial activity, which in turn has intensified the complexity of economic opportunity. Accordingly, it suggests that the role of prior knowledge as a source of human capital will occupy an increasingly central role in nascent entrepreneurial activity given further efforts to develop entrepreneurial opportunity through social relationships are often needed (Hitt et al., 2002). Therefore, it is possible that a greater degree of formal training will be associated with technologically based nascent entrepreneurial activity (e.g., Schenkel, Matthews, & Maslyn, 2006). It seems reasonable to expect that because technologically-oriented venturing activity will require greater degrees of formal knowledge accumulation and learning, it is also more likely to be associated with tacit knowledge, or knowledge that is not widely known or shared. By contrast, non-technologically oriented ventures are more likely to be associated with explicit knowledge, or knowledge that is by definition codifiable and more widely shared (Smith, Matthews, & Schenkel, 2009). Accordingly, we would expect that prior knowledge heterogeneity would facilitate more innovativeness in terms of opportunities identified in technologically-based efforts where tacit knowledge occupies a central role precisely because the heterogeneity could foster thinking about broader and as yet identified models for commercialization. In addition, such thinking would be less likely to encounter constraints associated with shared or preexisting commercialization models. By contrast, prior knowledge heterogeneity would facilitate less innovativeness in terms of opportunities identified in non technologically-based venturing activity where explicit knowledge occupies a central role because such knowledge would be associated
with a greater tendency toward convergence in thinking about the viability of commercial approaches. In short, the explicitness of the prior knowledge would lead to a convergence in thinking that acts as a constraint in terms of recognizing innovative opportunity. Accordingly, this leads us to the following hypotheses:

\[ H4 – The \text{ relationship between prior knowledge heterogeneity and the type of opportunity identified will be moderated by technology orientation of the venture.} \]

4. Data and Method
This research utilizes publicly available archival data from the Panel Study of Entrepreneurial Dynamics (PSED) in order to examine the proposed relationships. The PSED was designed to identify and collect data from a nationally representative sample of nascent entrepreneurs (Gartner, Shaver, Carter, & Reynolds, 2004).

4.1 Variables
4.1.1 Opportunity type. Measuring different types of opportunities is challenging in part because single item measures rarely capture the tacit (Smith et al., 2009) and innovative (Samuelsson & Davidsson, 2008) nature of the construct. Because our focus is on the innovative nature of the opportunity, we followed these authors by constructing a formative index designed to capture the summative, or composite, nature of the observed variables that allows each to contain measurement error (Samuelsson & Davidsson, 2008). Smith et al. (2009) point out that the primary difference between such a formative measure and its reflective counterpart revolves around the direction of causation. Reflective indicators are presumed to “reflect” the unidimensionality of a construct such that individual indicators should be correlated with other indicators. By contrast, formative indicators are presumed to “cause” the latent construct. Because indicators represent different construct dimensions they need not be correlated, nor represent the same underlying dimension. The advantages of formative measures include the ability to construct a more informative measure by allowing the identification of qualitatively different indicators of the construct in a given
situation, as well as one that can be utilized more generally across situations (e.g., industries) (Samuelsson & Davidsson, 2008). The innovativeness opportunity index was constructed from five items following Samuelsson and Davidsson (2008) in order to enhance the comparability of our results. The first and second items asked respondents whether or not intellectual property protection has (Q124) or (Q125) would be applied for (patent, trademark, or design protection). These items were combined into a single item initially given the conceptual overlap in the context of this study’s primary research question. Because intellectual property protection is based on creativity and innovation, responses indicating an application has not or would not be filed were then coded as 0 and those indicating one has or would be filed available coded as 1. The third item (Q300) asked respondents if spending money on research and development will be a major priority for this new business. Responses indicating research and development spending would not be a priority were coded as 0 and those indicating it would be a priority coded as 1. The fourth item (Q297) asked respondents if the new firm has a unique advantage compared to the competitors. Responses indicating no unique competitive advantage were coded as 0 and those indicating a unique competitive advantage coded as 1. The fifth item (Q293) asked respondents if the new firm’s competition is or is expected to be low, moderate or strong. We reasoned that no or low competition or expected competition is indicative of an innovative product (coded as 1), whereas moderate or strong competition or expected competition is indicative of an imitative opportunity (coded as 0). Each of the dichotomous responses was then added to create an opportunity innovativeness index score with a potential response range from 0 (imitative) to 4 (innovative).

4.1.2 Opportunity identification process. This measure consisted of three items. Each asked respondents to report their level of agreement with respect to how well a statement described the firm and its situation. The first description (QK1j) suggested the respondent had “engaged in a deliberate, systematic search for an idea for a new business”. A second (QK1l) suggested that for the respondent, “identifying business
opportunities has involved several learning steps over time, rather than a one-time thing”. Each of these items was coded on a one (completely disagree) to five (completely agree) Likert-type scale. A third item (QK1k) suggested that “the best business ideas just come, without a need to search for them” (reverse coded to facilitate interpretation consistency). These items were aggregated into a single measure for subsequent data analysis, with a higher score reflecting a more systematic search-based process given prior research demonstrating strong internal consistency among these items (Patel & Fiet, 2009).

4.1.3 Prior knowledge heterogeneity. This measure was constructed from four items following prior research suggesting that tacit or implicit knowledge gained through experience plays a particularly influential role as source of human capital in the recognition of opportunity (e.g., Davidsson & Honig, 2003; D'Souza, 2009; Koller, 1988; Schenkel, 2004; Shane, 2000; Smith et al., 2009). Respondents were to identify how many years of full time, paid work experience they had in any field (Q340), as well as managerial, supervisory, or administrative responsibilities (Q341). Respondents were also asked to identify how many years of work experience they had in the industry where the new business would compete (Q199) and how many other businesses they’d helped start (Q200). Responses indicating experience along each of these dimensions were coded as 0 and those indicating any level of experience coded as 1. Each of these dichotomous responses was then added to create a prior knowledge heterogeneity index score with a potential response range from 0 to 4 and a higher score reflecting greater heterogeneity.

4.1.4 Technology vs. Non-Technology Orientation. Item 301 of the phone survey asked, “Would you consider this new business to be hi-tech? If nascent entrepreneurs answered, “no,” we classified the nascent entrepreneur’s orientation as non technologically-based (NT) and coded these responses as 0. If nascent entrepreneurs answered, “yes,” we classified this type of the nascent entrepreneur’s orientation technologically-based (T) and coded these responses as 1.

5. Results and Findings
Table 1 reports means, standard deviations, and zero-order correlations among variables for all nascent entrepreneurs. Whereas opportunity identification process was unrelated to opportunity type, results suggest that having heterogeneous prior knowledge (r = .159, p < .05) was positively and significantly associated with more innovative opportunity.

Does the type of opportunity identification process (i.e., passive versus systematic search) used by the entrepreneur impact type of opportunity (i.e., imitative versus innovative) likely to be identified? Multiple regression results presented in table 2 suggest it does not. As shown in model 1, opportunity identification process (i.e., passive search and systematic search) was unrelated (β = -.022, p > .05) to opportunity type (i.e., imitative versus imitative) suggesting no support for hypothesis 1a or 1b.

Does the heterogeneity of prior knowledge used by the entrepreneur influence the type of opportunity identify by the entrepreneur? Multiple regression results presented in table 2 suggest it does. As shown in model 1, results suggest prior knowledge heterogeneity is positively related to opportunity innovativeness (β = .158, p < .05) suggesting support for hypothesis 2a.

Does the combination of prior heterogeneity knowledge and identification process type utilized influence the type of opportunity identified? Results suggest it does not. We followed Baron and Kenny's (Baron & Kenny, 1986) suggestion to test for an interaction between prior knowledge heterogeneity and opportunity identification process. Model 2 of the multiple regression results shows that despite the overall regression model being significant, the interaction between opportunity identification process and prior knowledge heterogeneity is unrelated to opportunity type (β = .20, p < .05). Thus no support is found for hypothesis 2b.
Do these proposed relationships differ between technology-based and nontechnology-based nascent venturing efforts? Tables 3 and 4 below reports means, standard deviations, and zero-order correlations among variables for those individuals engaged in the creation of technology oriented and nontechnology oriented nascent new ventures respectively. As in the full sample, results in technology oriented sub-sample suggest prior knowledge heterogeneity was also positively and significantly associated with more innovative opportunity type. By contrast, no significant relationship was found in the non-technology oriented sub-sample.

<Insert Table 3 about here>
<Insert Table 4 about here>

Multiple regression results presented in tables 5 and 6 show a similar distinction in pattern between nascent technology-oriented and nontechnology oriented venturing efforts, but the results offer no support for hypothesis 3 or 4. As shown in model 1 of table 5, neither the opportunity identification process ($\beta = 0.065, p > .10$) nor significantly prior knowledge heterogeneity ($\beta = 0.167, p < .10$) were significantly related to the type of opportunity identified for technology-oriented nascent venturing efforts. Similarly, as shown in model 1 of table 5, the opportunity identification process ($\beta = -0.046, p > .10$) was not significantly related to the type of opportunity identified for nontechnology-oriented nascent venturing efforts. Although prior knowledge heterogeneity ($\beta = 0.149, p < .10$) was marginally related to the identification of opportunities of a more innovative nature, the overall regression model was not rendering this finding unreliable.

Despite not find statistical significant main effects, we followed Baron and Kenny’s (Baron & Kenny, 1986) suggestion to test for an interaction between opportunity identification process and prior knowledge heterogeneity for both subsamples. Model 2 in tables 5 and 6 show these results. Interestingly these results show that not only is the overall regression model statistically significant, the interaction between opportunity identification process and prior knowledge heterogeneity is also negatively and marginally significantly related to opportunity type ($\beta = -1.188, p < .10$) for technology-oriented nascent venturing
efforts (table 5). By contrast, neither the overall regression model nor the interaction between opportunity identification process and prior knowledge heterogeneity predicting opportunity type ($\beta = -1.188, p < .10$) were statistically significant for technology-oriented nascent venturing efforts (table 6).

6. Discussion and Limitations

Researchers have found that an important issue in the field revolves around the degree of innovativeness of newly identified opportunities that in turn may lead to firm founding (Bhave, 1994; Cliff et al., 2006; Davidsson & Wiklund, 2001; Shepherd et al., 2000; Zimmerman & Zeitz, 2002). However, there is little to no research done on the antecedents of innovative and imitative opportunities. By way of this study, we fill this void by looking at the effect of the two most prominent aspects of opportunity identification in the entrepreneurship literature – effect of prior knowledge, and effect of opportunity identification process used by the entrepreneur.

Based on past literature, we proposed that the type of opportunity identification process used would impact the type of opportunity identified in such a way that individuals who used passive search would identify innovative opportunities, while individuals who used systematic search would identify imitative opportunities. Our results suggest that despite the relationships proposed in this investigation, the level of search (i.e., more passive versus more systematic) is unrelated to the innovativeness of the opportunities identified.

Second, we hypothesized that the heterogeneity of the entrepreneur’s prior knowledge would be positively associated with the innovativeness of the opportunity identified. Our results find statistically significant support for this hypothesis, suggesting that individuals who make use of heterogeneous prior knowledge are likely to identify opportunities that are more innovative in nature. We hypothesized further that the heterogeneity of the entrepreneur’s prior knowledge in conjunction with the search process
employed would be associated with the innovativeness of the opportunity identified but found no support for
this hypothesis.

Third, and based on literature that suggested that there is a potential difference between
technology and non-technologically oriented venturing efforts, we hypothesized that the relationship
between the entrepreneurs’ opportunity identification process and the type of opportunity identified would
be moderated by the technology orientation of the venture (H3), and that the relationship between prior
knowledge and the type of opportunity identified would be moderated by technology orientation of the
venture (H4). Results suggest that neither of these hypotheses were statistically supported. Interestingly
however, when looking at technology oriented nascent venturing efforts, and running the model that
contained the interaction term, we did find marginal statistical significance for both hypothesis H3 as well as
hypothesis H4.

One reason for these unexpected finding and the potential limitation it represents could be that the
use of a formative measure fails to accurately capture the nature or fullness of the entrepreneurial
construct. Simply put, the methodological use of formative versus a reflective measure undoubtedly
introduces the potential for the issue of measurement error to exist. However, given the measure was
developed based upon prior investigations (i.e., Samuelsson & Davidsson, 2008; Smith et al., 2009), we
believe this suggests that one potentially fruitful direction for future researchers revolves around further
exploring and examining the dimensionality of “opportunity” as a construct. For example, future
researchers may want to explore how the relationships that other constructs known to be related to
entrepreneurial opportunity compare with those demonstrated through the measure utilized in this study.

Although based on a nationally representative sample, it is also important to note that the findings
reflected in this investigation are limited in that they reflect a U.S. base population. This suggests that it
remains possible that the present results may not generalize to other cultures. Consequently, future research is necessary to address the potentially important cross-cultural possibilities.

7. Conclusion and Implications

While debate clearly continues to focus on the role innovation plays in as a determinant of the distinctiveness of entrepreneurship as a discipline, it is increasingly argued that a fundamentally important issue in its own right revolves around the degree of opportunity novelty as a basis for firm founding (Bhave, 1994; Cliff et al., 2006; Davidsson & Wiklund, 2001; Shepherd et al., 2000; Zimmerman & Zeitz, 2002). Our paper points out that unraveling the interdependencies of the various relationships may be more complex than earlier research has suggested. For example, despite studies suggesting that passive and systematic forms of search activities may lead to different types of opportunities, our findings do not suggest the existence of a systematic relationship between the opportunity identification process and the types of opportunities identified. By contrast, possessing a greater breadth of heterogeneous prior knowledge does appear to provide a basis for identifying more innovative opportunities. Perhaps more interesting, the effect of prior knowledge heterogeneity appears to hold regardless of whether or not a passive or active approach to identifying opportunities is taken.
References


TABLE 1: Means, Standard Deviations and Correlations - All Nascent

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
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<tbody>
<tr>
<td>Opportunity type</td>
<td>0.35</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Opportunity identification process</td>
<td>3.27</td>
<td>0.79</td>
<td>0.012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>3.14</td>
<td>0.80</td>
<td>0.159**</td>
<td>-0.022</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

TABLE 2:
Results of Multiple Regression Analyses Predicting Opportunity Type* - All Nascent

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>-.022</td>
<td>.331</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>.158***</td>
<td>.523**</td>
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<tr>
<td>Opportunity identification process X</td>
<td></td>
<td></td>
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<tr>
<td>Prior knowledge heterogeneity</td>
<td></td>
<td>-.499</td>
</tr>
<tr>
<td>Model F value</td>
<td>3.448**</td>
<td>3.012**</td>
</tr>
<tr>
<td>R²</td>
<td>.025</td>
<td>.033</td>
</tr>
</tbody>
</table>

* n = 272. Standardized regression coefficients are shown.
*** p<.01; ** p<.05; * p<.10
TABLE 3: Means, Standard Deviations & Correlations
Technology-Oriented Nascent Venturing Efforts

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity type</td>
<td>0.49</td>
<td>0.50</td>
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<td></td>
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<tr>
<td>2. Opportunity identification process</td>
<td>3.30</td>
<td>0.71</td>
<td>.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Prior knowledge heterogeneity</td>
<td>3.04</td>
<td>0.98</td>
<td>.250</td>
<td>.011</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

TABLE 4: Means, Standard Deviations & Correlations
Non-Technology Nascent Venturing Efforts

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity type</td>
<td>0.27</td>
<td>0.44</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Opportunity identification process</td>
<td>3.27</td>
<td>0.83</td>
<td>-.017</td>
<td></td>
<td></td>
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<tr>
<td>3. Prior knowledge heterogeneity</td>
<td>3.16</td>
<td>0.76</td>
<td>.083</td>
<td>-.014</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

TABLE 5: Multiple Regression Analyses
Predicting Opportunity Type \(^{a}\) - Nascent Technology Entrepreneurs

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>.065</td>
<td>.774*</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>.167</td>
<td>1.086**</td>
</tr>
<tr>
<td>Opportunity identification process X Prior knowledge heterogeneity</td>
<td>-1.188*</td>
<td></td>
</tr>
<tr>
<td>Model F value</td>
<td>1.419</td>
<td>2.158*</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.032</td>
<td>.072</td>
</tr>
</tbody>
</table>

\(^{a}\) n = 272. Standardized regression coefficients are shown.

*** p<.01; ** p<.05; * p<.10

TABLE 6: Multiple Regression Analyses
Predicting Opportunity Type \(^{a}\) - Nascent Non Technology Entrepreneurs

<table>
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<tr>
<th>Predictor Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>-.046</td>
<td>.104</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>.149**</td>
<td>.290</td>
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<tr>
<td>Opportunity identification process X Prior knowledge heterogeneity</td>
<td>-.209</td>
<td></td>
</tr>
<tr>
<td>Model F value</td>
<td>2.182</td>
<td>1.516</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.024</td>
<td>.025</td>
</tr>
</tbody>
</table>

\(^{a}\) n = 272. Standardized regression coefficients are shown.

*** p<.01; ** p<.05; * p<.10
OPPORTUNITY IDENTIFICATION: ROLE OF KNOWLEDGE HETEROGENEITY AND OPPORTUNITY IDENTIFICATION PROCESS

Rodney D’Souza

1. Introduction

Opportunity identification is considered by many as the first step in the entrepreneurial process (Baron & Shane, 2006; Baron, 2004; Shane & Venkataraman, 2000). But from whence to entrepreneurial opportunities come? Entrepreneurial opportunity has been defined by some as the possibility to introduce innovative goods or services to a marketplace (Gaglio, 2004; Singh, 2000). From this perspective, an opportunity can only be considered an entrepreneurial opportunity if it is innovative or radical to a society or industries (Gaglio & Katz, 2001; Schumpeter, 1934; Shane & Venkataraman, 2000; Smith, Matthews, & Schenkel, 2009). By contrast, others have defined entrepreneurial opportunities simply as situations where “pure profit potential” exists (e.g., Kirzner, 1973) through the introduction of imitative goods or services generated by the earlier errors of other marketplace participants. Additionally, they can be seen as “arising from unanticipated independently-caused, changes in underlying market circumstances” (Kirzner, 1997: 7).

While debate clearly continues to focus on the issue of whether innovation (e.g., Schumpeter, 1934) or firm creation (e.g., Gartner, 1989) reflects the distinctiveness of entrepreneurship as a research domain, the focus of the debate has changed in recent years. Specifically, researchers have increasingly observed that a fundamentally important issue in its own right revolves around the nature or degree of opportunity novelty as a basis for firm founding (Bhave, 1994; Cliff, Jennings, & Greenwood, 2006; Davidsson & Wiklund, 2001; Shepherd, Douglas, & Shanley, 2000; Zimmerman & Zeitz, 2002). This is an important issue for
research to inform because even though innovation can be a source of competitive advantage (Barney, 1991; Porter, 1991; Wernerfelt, 1984), not all firms successfully founded and sustained by entrepreneurs are based on innovative opportunities. For example, simple observation of the modern growth in franchise-based business ventures (e.g., Jiffy Lube, Valvoline, EZ Lube, etc.) suggests that the number of individual firms founded on the basis of imitative opportunities in a market is likely to disproportionately outweigh those founded on the basis of innovative opportunities. Empirical research findings that distinguish imitative from innovative opportunities appear to support such anecdotal observation. For example, Aldrich (1999) found evidence suggesting the majority of new firms are actually founded simply by reproducing or imitating what has been done before.

Despite the contributions and insights of prior research, little work has explicitly sought to advance our understanding of the processes that bring about the differences between imitative and innovative opportunities. For example, Carland et al. (1984) have noted that innovation is a key factor that helps distinguish entrepreneurial opportunities from simple arbitrage opportunities (Carland, Hoy, Boulton, & Carland, 1984). Similarly, Shane (2001) focused on the impact that prior knowledge had on opportunity recognition by entrepreneurs. Yet as recent investigations illustrate (e.g., Fiet & Patel, 2009), empirical researchers have focused on the mechanisms influencing the pursuit of entrepreneurial opportunity more universally, rather than distinguishing between those that are innovative and those that are imitative in nature. As a result, insight into the nature and origins of opportunity and its relationship to the nascent firm founding process remains limited by the possibility that important contextual differences exist (Ucbasaran, Wright, & Westhead, 2006) and systematically differ across opportunities. In short,
the need for research that focuses more explicitly on the nature and variation of entrepreneurial opportunities is highlighted (Shepherd & DeTienne, 2005;).

We seek to address this gap by investigating four research questions designed to build on prior work (i.e., Corbett, 2005; Dimov, 2007; Shane & Venkataraman, 2000; Shane, 2001; Smith, Matthews, & Schenkel, 2009) emphasizing a more prominent role of the nature of the entrepreneurial opportunity. First, does the type of opportunity identification process (i.e., alertness versus systematic search) used by the entrepreneur impact type of opportunity (i.e., imitative versus innovative) likely to be identified? Second, does the heterogeneity of prior knowledge used by the entrepreneur influence the type of opportunity identify by the entrepreneur? Third, does the combination of identification process type and heterogeneity of an entrepreneur’s prior knowledge influence the type of opportunity identified? Fourth, do these relationships differ between technology-based and nontechnology-based nascent venturing efforts? Our proposed model is as follows:

<INSERT FIGURE 1 ABOUT HERE>

This paper proceeds in the following manner. First, we review the literature on entrepreneurial opportunity identification processes with respect to two schools of thought that appear dominant in the entrepreneurship literature. We then review the literature focusing on entrepreneurial opportunities, paying particular attention to the innovative versus imitative distinction it reveals. This is followed by a discussion on how the hypotheses were tested based on data obtained from the Panel Study of Entrepreneurial Dynamics (PSED). The paper concludes with a discussion of our results and suggested future research directions.

2. Literature Review

2.1 Opportunity Identification Process
The purpose of this research is not to explore implications of the two types of opportunity identification processes – passive search and systematic search\(^1\) per se. Rather, it is to determine whether the use of systematic search or the process of entrepreneurial alertness in finding information systematically leads individuals to identify opportunities that are characterized as more innovative in nature. We now turn attention to a discussion of two broad schools of thought on how individuals identify entrepreneurial opportunities.

2.1.1 Systematic Search

One opportunity identification school of thought suggests that the search for information about unknown venture ideas can be replaced with the search for known information sources (Fiet, 1996). Scholars subscribing to this school of thought suggest that discovery of information about an opportunity is dependent on an entrepreneur’s prior specific knowledge. Proponents of this view further suggest that the use of a systematic search of information within an individual’s consideration set - grouping of information channels that emits signals that may indicate a potential discovery (Fiet, 2002) - might lead to a greater chance of discovering information within that particular consideration set than discovering information outside one’s consideration set (Patel & Fiet, 2009).

While systematic search research has yielded important insights into the opportunity identification process, a number of researchers have suggested that it is impossible to search systematically for unknown discoveries if the search domain itself is unknown (Kirzner, 1997; Kaish and Gilad, 1991). This argument is based on the idea that in an unbounded search domain,
no optimal solution for which search can focus exists. Proponents of the systematic search perspective address this argument by suggesting that a consideration set approach restricts a person’s search domain to his/her prior knowledge, which in turn makes the search for information possible as it is based on what the person possesses, rather than on a body of shared and commonly agreed upon information by market participants.

2.1.2 Passive Search

A second opportunity identification school of thought is based on Kirzner's early conceptualization of alertness, which is predominantly considered an economics-based perspective. In this work, Kirzner defined “alertness” as “the ability to notice without search opportunities that have hitherto been overlooked” (Kirzner, 1979: 48). Interestingly, his conceptualization does not suggest that individuals identify opportunities by pure accident. Rather, it suggests the notion of opportunity discovery through alertness is somewhere between that of deliberate search and that generated by pure luck (Kirzner, 1997), reflecting what can be called passive search. While in the mode of passive search, the entrepreneur is receptive, but at the same time, not engaged in a formal, systematic search process (Ardichvili, Cardozo, & Ray, 2003). In other words, it is consistent with the proverbial idea that “chance favors the prepared mind”.

Like other Austrian economists (e.g., Hayek, 1945; Mises, 1949), Kirzner’s perspective suggests that opportunities exist at least in part because different people have access to different information in the form of facts, knowledge or data (Kirzner, 1997). Because differential access is likely to result in the possession of incomplete information by any one individual, it is also likely to lead to individuals making errors in the form of misallocated resources in the market.
Some people rightly recognize that resource misallocations exist. These people then obtain the resources, recombine them, and exploit them in more efficient and effective uses (Casson, 1982).

The review above suggests that while both these perspectives (passive and systematic search) emphasize the importance of information access, they differ fundamentally from earlier work in that they suggest how individuals gain access to and use information could in turn lead to differences in the identification of an entrepreneurial opportunity.

2.2 Entrepreneurial Opportunities

Researchers take different views toward the nature of opportunities, which in turn suggests the potential for differences to exist with respect to how individuals are likely to come across them. Broadly, these views can be characterized as reflecting three schools of thought. The first view reflects the idea that opportunities reflect a physical tangibility that individuals can recognize. This view operates under the assumption that the source of demand and the source of supply readily exist but are unconnected by the existing market price mechanism. According to this school of thought, individuals recognize that an unmet need exists between existing sources of both supply and demand, and that this unmet need can be exploited. Because sources of both supply and demand already exist, exploitation of these types of opportunities often described simply as taking the form of arbitrage (Alvarez & Barney, 2008; Gregoire, 2005; Venkataraman & Sarasvathy, 2001).

The second view reflects the idea that opportunities are created by individuals (e.g., Schumpeter, 1934). This view assumes that neither the source of supply nor demand exists, thus rendering the existence of a connection via the market mechanism impossible at the outset of the exploitation process. According to this school of thought, both supply and demand have to be created first, and then taken advantage of by individuals (i.e., entrepreneurs) to create

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opportunities for financial return (Venkataraman & Sarasvathy, 2001). In sum, the exploitation of these types of opportunities often described as taking the form of creative (Dimov, 2007) and development oriented (Ardichvili, Cardozo, & Ray, 2003) efforts on the part of the entrepreneur.

The third view considers the idea that opportunities reflect a physical tangibility in part, but also require the discovery or identification of additional elements that require action by individuals to bring into existence. This view operates under the assumption that either the source of demand or the source of supply is unknown (but not both) and unconnected by any market mechanism as a result. According to this school of thought, an individual discovers or identifies either a novel way to serve an existing market need, or discovers or identifies a new market that could be satisfied with an existing means of supply (Sarasvathy, 2001). This perspective shares qualities of the recognition and creativity views in that it acknowledges both identification aspect of existing resources, as well as the need to create or develop a corresponding connection between existing and potential uses in the marketplace over time (Ardichvili, Cardozo, & Ray, 2003; Dimov, 2007; Kirzner, 1997).

This review suggests that the existence of entrepreneurial opportunities can be conceptualized categorically those of either an imitative or innovative nature though such a dichotomy is rarely if ever expected to be observed in practice. Rather, in practice these ideal types are more likely to reflect opposing ends of a continuum (Samuelsson and Davidsson, 2008; Weber 1947). Imitative opportunities can be seen as those that represent the existence of gaps and mismatches in information across market participants that could be profitably exploited (Kirzner, 1979). These imitative opportunities stem from changes in supply and demand which are in turn brought about by market inefficiencies (Aldrich & Martinez, 2001; Aldrich, 1999; Amason, Shrader, & Tompson, 2006; Kirzner, 1973; Shane, 2003). These opportunities are
associated with routines and competencies that vary slightly from those of existing, similar ventures (Aldrich & Kenworthy, 1999; Aldrich & Martinez, 2001). By contrast, innovative opportunities can be conceptualized as those that evolve largely from creative human action coupled with changes in technology, political structure, regulatory environment, and social/demographic environments (Schumpeter, 1934; Shane, 2003). Research suggests that a hallmark of innovative opportunities is that they break away from existing knowledge and information streams (Amason et al., 2006; Shane, 2003), leading to the creation of products or services that are significantly novel or different from other existing products, services, or ventures.

3. Hypothesis Development

3.1 The Relationship between Opportunity Identification Process and Opportunity Type

Studies suggest that constrained, systematic search is focused on the search of known information sources, rather than a search for unknown venture ideas (e.g., Fiet, 2007). According to this information-based perspective, the search for information is constrained by an individual’s bounded rationality, as well as his/her prior knowledge. It suggests that entrepreneurs make use of existing informational channels – sources of signals (current information that changes a person’s ideas about future state) (Fiet, 1996; Fiet, 2007) to search for information. An underlying rationale of this school of thought is that opportunity identification would depend on “a fit between an entrepreneur’s specific knowledge and a particular venture idea” (Fiet, 2007: 5). This means that an individual must “identify domains in which he or she possesses prior, specific knowledge, create a set of information channels with a high probability of finding informative clues of commercial potential, craft a search strategy, evaluate signals, and develop decision rules” (Fiet, Norton, & Clouse, 2007: 330). DeTienne and Chandler (2004:
further suggest that “search is envisioned as a sorting or winnowing through already existing opportunities and human creativity is not theorized to play a major role”.

The above discussion suggests that entrepreneurs who utilize a systematic search process to identify opportunities would be disproportionately attuned to information channels and signals related to their prior specific knowledge. Specifically, individuals who have only prior specific knowledge about a specific domain might miss information signals related to the broader domain itself, but not those relevant to potential entrepreneurial opportunities within the domain (Chang & Burke, 2007; D'Souza, 2009). Additionally, prior knowledge could lead to the entrepreneurs relying on biases such as neglect of probability (ignoring relevant information), framing effects (decisions being affected by irrelevant information), and anchoring (giving excessive weight to an unimportant but salient information) (Kahneman, Slovic, & Tversky, 1982; Nisbett & Ross, 1980; Sherman & Corty, 1984), which could in turn lead to the identification of opportunities that are of an imitative nature (D'Souza, 2009). Accordingly, we expect:

**H1a – Systematic search will be positively associated with the identification of imitative opportunities.**

Research focusing on cognitive processes, by contrast, suggests a person’s mental models help direct and guide attention and information processing for specific situations that they encounter (Gaglio & Katz, 2001). Kaish and Gilad (1991), for instance, proposed and found empirical support for their hypothesis that individuals who did not search systematically for opportunities were able to position themselves in the flow of information so as to increase the probability of identifying opportunities (Gaglio & Katz, 2001). Similarly, other researchers have found that passive search, helps entrepreneurs overcome problems related to the newness of a
product or service, as well as problems related to distribution of information in situations where new technology is being introduced or new markets are being created (Baron & Markman, 1999). Gaglio and Katz (2001) further suggest that individuals employing alertness to identify opportunities not only have access to new information, but also utilize this information in a different way than do individuals who do not employ this process. In short, these findings seem to suggest a positive relationship between passive search and innovativeness. Accordingly, we expect:

\[ H1b – \text{Passive search will be positively associated with the identification of innovative opportunities.} \]

3.2 The Relationship between Prior Knowledge Heterogeneity and Opportunity Identification Process

In the field of entrepreneurship, prior knowledge has been studied as a form of human capital that often reflects the individual’s level of formal education, startup experience, work experience, and managerial experience (Cohen & Levinthal, 1990; Kim, Aldrich, & Keister, 2006; Schenkel, 2004). Theory suggests that not only does prior knowledge lead to the generation of business related skills (Boden & Nucci, 2000; Kim et al., 2006), but that people with prior knowledge of operating in a particular industry have an “edge” over people who do not have that specific industry information in identifying opportunities (Shane, 2000, 2003). This suggests that certain specific prior knowledge is necessary for the identification of at least some opportunities to occur (Dimov, 2003).

Prior knowledge has also been shown to lead to access to collective forms of capital (i.e., social and financial), such as the development of better relations with suppliers and customers.
Further, research suggests that diverse elements of knowledge, when brought together, often lead to new combinations (Campbell, Marsden, & Hurlbert, 1986; Granovetter, 1973; Singh, 2000), and by extension new means – end frameworks. Paralleling such observations, this suggests that the identification of opportunities would be influenced positively by the heterogeneity of a person’s prior knowledge, at least in part, because it would increase the odds that both the tacit and explicit elements of knowledge will enter into a potential nascent entrepreneur’s thinking to stimulate new means – end connections. Therefore, we expect:

\[H_2a\] – An entrepreneur’s prior knowledge heterogeneity will influence the type opportunity identified in such a way that more prior knowledge heterogeneity will be positively associated with the identification of innovative opportunities.

\[H_2b\] - The relationship between the entrepreneurs’ opportunity identification process and the type of opportunity identified will be moderated by the entrepreneur’s prior knowledge heterogeneity.

3.3 Influence of Technology Orientation

Studies focusing on nascent entrepreneurial activity often make the assumption that prior knowledge and opportunity identification process will have a universally consistent impact on the opportunity identification process across all entrepreneurs (e.g., Patel & Fiet, 2009). Yet there is evidence to suggest that entrepreneurs are not a cohesive group and that much can be gained by considering the impact of these antecedent relationships across different contexts (Ucbasaran, Westhead, & Wright, 2001).
As suggested earlier, the passive or systematic way in which entrepreneur’s gains access to information is expected to play an important part in the type of opportunities identified. Systematic search for information is expected to lead to the accumulation of knowledge within a set paradigm. When dealing with technology based venturing efforts, this knowledge would include information about existing and emerging technologies along with potential market opportunities (Shane, 2000). However, individuals who engage in a systematic search for information in a particular domain might at the same time be prone to miss information generally related to the domain, but not specifically within the domain (Chang & Burke, 2007). Research has indeed found that individuals with knowledge about a particular domain do not always engage in a thorough search for additional information because they take their knowledge for granted (Chang & Burke, 2007; D'Souza, 2009), and that they rely on heuristics and are swayed by biases to a large. Collectively, this would seem to suggest that individuals with domain specific knowledge would be likely to gather information related to that domain as opposed to broader domains, and that such a leaning would be more likely to result in the identification of opportunities that are imitative in nature.

H3 – The relationship between the entrepreneurs’ opportunity identification process and the type of opportunity identified will be moderated by the technology orientation of the venture.

Liao and Welsch (2005) note that technology-based entrepreneurial activity is likely to be associated with greater emphasis on knowledge accumulation and learning than nontechnology-based entrepreneurial activity, which in turn has intensified the complexity of economic opportunity. Accordingly, it suggests that the role of prior knowledge as a source of human
capital will occupy an increasingly central role in nascent entrepreneurial activity given further efforts to develop entrepreneurial opportunity through social relationships are often needed (Hitt et al., 2002). Therefore, it is possible that a greater degree of formal training will be associated with technologically based nascent entrepreneurial activity (e.g., Schenkel, Matthews, & Maslyn, 2006). It seems reasonable to expect that because technologically-oriented venturing activity will require greater degrees of formal knowledge accumulation and learning, it is also more likely to be associated with tacit knowledge, or knowledge that is not widely known or shared. By contrast, non-technologically oriented ventures are more likely to be associated with explicit knowledge, or knowledge that is by definition codifiable and more widely shared (Smith, Matthews, & Schenkel, 2009). Accordingly, we would expect that prior knowledge heterogeneity would facilitate more innovativeness in terms of opportunities identified in technologically-based efforts where tacit knowledge occupies a central role precisely because the heterogeneity could foster thinking about broader and as yet identified models for commercialization. In addition, such thinking would be less likely to encounter constraints associated with shared or preexisting commercialization models. By contrast, prior knowledge heterogeneity would facilitate less innovativeness in terms of opportunities identified in non-technologically-based venturing activity where explicit knowledge occupies a central role because such knowledge would be associated with a greater tendency toward convergence in thinking about the viability of commercial approaches. In short, the explicitness of the prior knowledge would lead to a convergence in thinking that acts as a constraint in terms of recognizing innovative opportunity. Accordingly, this leads us to the following hypotheses:

**H4** – *The relationship between prior knowledge heterogeneity and the type of opportunity identified will be moderated by technology orientation of the venture.*
4. Data and Method

This research utilizes publicly available archival data from the Panel Study of Entrepreneurial Dynamics (PSED) in order to examine the proposed relationships. The PSED was designed to identify and collect data from a nationally representative sample of nascent entrepreneurs (Gartner, Shaver, Carter, & Reynolds, 2004).

4.1 Variables

4.1.1 Opportunity type. Measuring different types of opportunities is challenging in part because single item measures rarely capture the tacit (Smith et al., 2009) and innovative (Samuelsson & Davidsson, 2008) nature of the construct. Because our focus is on the innovative nature of the opportunity, we followed these authors by constructing a formative index designed to capture the summative, or composite, nature of the observed variables that allows each to contain measurement error (Samuelsson & Davidsson, 2008). Smith et al. (2009) point out that the primary difference between such a formative measure and its reflective counterpart revolves around the direction of causation. Reflective indicators are presumed to “reflect” the unidimensionality of a construct such that individual indicators should be correlated with other indicators. By contrast, formative indicators are presumed to “cause” the latent construct. Because indicators represent different construct dimensions they need not be correlated, nor represent the same underlying dimension. The advantages of formative measures include the ability to construct a more informative measure by allowing the identification of qualitatively different indicators of the construct in a given situation, as well as one that can be utilized more generally across situations (e.g., industries) (Samuelsson & Davidsson, 2008). The innovativeness opportunity index was constructed from five items following Samuelsson and
Davidson (2008) in order to enhance the comparability of our results. The first and second items asked respondents whether or not intellectual property protection has (Q124) or (Q125) would be applied for (patent, trademark, or design protection). These items were combined into a single item initially given the conceptual overlap in the context of this study’s primary research question. Because intellectual property protection is based on creativity and innovation, responses indicating an application has not or would not be filed were then coded as 0 and those indicating one has or would be filed available coded as 1. The third item (Q300) asked respondents if spending money on research and development will be a major priority for this new business. Responses indicating research and development spending would not be a priority were coded as 0 and those indicating it would be a priority coded as 1. The fourth item (Q297) asked respondents if the new firm has a unique advantage compared to the competitors. Responses indicating no unique competitive advantage were coded as 0 and those indicating a unique competitive advantage coded as 1. The fifth item (Q293) asked respondents if the new firm’s competition is or is expected to be low, moderate or strong. We reasoned that no or low competition or expected competition is indicative of an innovative product (coded as 1), whereas moderate or strong competition or expected competition is indicative of an imitative opportunity (coded as 0). Each of the dichotomous responses was then added to create an opportunity innovativeness index score with a potential response range from 0 (imitative) to 4 (innovative).

4.1.2 Opportunity identification process. This measure consisted of three items. Each asked respondents to report their level of agreement with respect to how well a statement described the firm and its situation. The first description (QK1j) suggested the respondent had “engaged in a deliberate, systematic search for an idea for a new business”. A second (QK1l) suggested that for the respondent, “identifying business opportunities has involved several learning steps over
time, rather than a one-time thing”. Each of these items was coded on a one (completely disagree) to five (completely agree) Likert-type scale. A third item (QK1k) suggested that “the best business ideas just come, without a need to search for them” (reverse coded to facilitate interpretation consistency). These items were aggregated into a single measure for subsequent data analysis, with a higher score reflecting a more systematic search-based process given prior research demonstrating strong internal consistency among these items (Patel & Fiet, 2009).

4.1.3 Prior knowledge heterogeneity. This measure was constructed from four items following prior research suggesting that tacit or implicit knowledge gained through experience plays a particularly influential role as source of human capital in the recognition of opportunity (e.g., Davidsson & Honig, 2003; D'Souza, 2009; Koller, 1988; Schenkel, 2004; Shane, 2000; Smith et al., 2009). Respondents were to identify how many years of full time, paid work experience they had in any field (Q340), as well as managerial, supervisory, or administrative responsibilities (Q341). Respondents were also asked to identify how many years of work experience they had in the industry where the new business would compete (Q199) and how many other businesses they’d helped start (Q200). Responses indicating experience along each of these dimensions were coded as 0 and those indicating any level of experience coded as 1. Each of these dichotomous responses was then added to create a prior knowledge heterogeneity index score with a potential response range from 0 to 4 and a higher score reflecting greater heterogeneity.

4.1.4 Technology vs. Non-Technology Orientation. Item 301 of the phone survey asked, “Would you consider this new business to be hi-tech? If nascent entrepreneurs answered, “no,” we classified the nascent entrepreneur’s orientation as non technologically-based (NT) and coded these responses as 0. If nascent entrepreneurs answered, “yes,” we classified this type of the nascent entrepreneur’s orientation technologically-based (T) and coded these responses as 1.
5. Results and Findings

Table 1 reports means, standard deviations, and zero-order correlations among variables for all nascent entrepreneurs. Whereas opportunity identification process was unrelated to opportunity type, results suggest that having heterogeneous prior knowledge ($r = .159, p < .05$) was positively and significantly associated with more innovative opportunity.

<Insert Table 1 about here>

Does the type of opportunity identification process (i.e., passive versus systematic search) used by the entrepreneur impact type of opportunity (i.e., imitative versus innovative) likely to be identified? Multiple regression results presented in table 2 suggest it does not. As shown in model 1, opportunity identification process (i.e., passive search and systematic search) was unrelated ($\beta = -.022, p > .05$) to opportunity type (i.e., imitative versus imitative) suggesting no support for hypothesis 1a or 1b.

<Insert Table 2 about here>

Does the heterogeneity of prior knowledge used by the entrepreneur influence the type of opportunity identify by the entrepreneur? Multiple regression results presented in table 2 suggest it does. As shown in model 1, results suggest prior knowledge heterogeneity is positively related to opportunity innovativeness ($\beta = .158, p < .05$) suggesting support for hypothesis 2a.

Does the combination of prior heterogeneity knowledge and identification process type utilized influence the type of opportunity identified? Results suggest it does not. We followed Baron and Kenny’s (Baron & Kenny, 1986) suggestion to test for an interaction between prior knowledge heterogeneity and opportunity identification process. Model 2 of the multiple regression results shows that despite the overall regression model being significant, the
interaction between opportunity identification process and prior knowledge heterogeneity is unrelated to opportunity type ($\beta = .20$, $p < .05$). Thus no support is found for hypothesis 2b.

Do these proposed relationships differ between technology-based and nontechnology-based nascent venturing efforts? Tables 3 and 4 below reports means, standard deviations, and zero-order correlations among variables for those individuals engaged in the creation of technology oriented and non-technology oriented nascent new ventures respectively. As in the full sample, results in technology oriented sub-sample suggest prior knowledge heterogeneity was also positively and significantly associated with more innovative opportunity type. By contrast, no significant relationship was found in the non-technology oriented sub-sample.

<Insert Table 3 about here>

<Insert Table 4 about here>

Multiple regression results presented in tables 5 and 6 show a similar distinction in pattern between nascent technology-oriented and nontechnology oriented venturing efforts, but the results offer no support for hypothesis 3 or 4. As shown in model 1 of table 5, neither the opportunity identification process ($\beta = 0.065$, $p > .10$) nor significantly prior knowledge heterogeneity ($\beta = 0.167$, $p < .10$) were significantly related to the type of opportunity identified for technology-oriented nascent venturing efforts. Similarly, as shown in model 1 of table 5, the opportunity identification process ($\beta = -0.046$, $p > .10$) was not significantly related to the type of opportunity identified for nontechnology-oriented nascent venturing efforts. Although prior knowledge heterogeneity ($\beta = 0.149$, $p < .10$) was marginally related to the identification of opportunities of a more innovative nature, the overall regression model was not rendering this finding unreliable.
Despite not finding statistical significant main effects, we followed Baron and Kenny’s (Baron & Kenny, 1986) suggestion to test for an interaction between opportunity identification process and prior knowledge heterogeneity for both subsamples. Model 2 in tables 5 and 6 show these results. Interestingly these results show that not only is the overall regression model statistically significant, the interaction between opportunity identification process and prior knowledge heterogeneity is also negatively and marginally significantly related to opportunity type ($\beta = -1.188, p < .10$) for technology-oriented nascent venturing efforts (table 5). By contrast, neither the overall regression model nor the interaction between opportunity identification process and prior knowledge heterogeneity predicting opportunity type ($\beta = -1.188, p < .10$) were statistically significant for technology-oriented nascent venturing efforts (table 6).

6. Discussion and Limitations

Researchers have found that an important issue in the field revolves around the degree of innovativeness of newly identified opportunities that in turn may lead to firm founding (Bhave, 1994; Cliff et al., 2006; Davidsson & Wiklund, 2001; Shepherd et al., 2000; Zimmerman & Zeitz, 2002). However, there is little to no research done on the antecedents of innovative and imitative opportunities. By way of this study, we fill this void by looking at the effect of the two most prominent aspects of opportunity identification in the entrepreneurship literature – effect of prior knowledge, and effect of opportunity identification process used by the entrepreneur.

Based on past literature, we proposed that the type of opportunity identification process used would impact the type of opportunity identified in such a way that individuals who used passive search would identify innovative opportunities, while individuals who used systematic
search would identify imitative opportunities. Our results suggest that despite the relationships proposed in this investigation, the level of search (i.e., more passive versus more systematic) is unrelated to the innovativeness of the opportunities identified.

Second, we hypothesized that the heterogeneity of the entrepreneur’s prior knowledge would be positively associated with the innovativeness of the opportunity identified. Our results find statistically significant support for this hypothesis, suggesting that individuals who make use of heterogeneous prior knowledge are likely to identify opportunities that are more innovative in nature. We hypothesized further that the heterogeneity of the entrepreneur’s prior knowledge in conjunction with the search process employed would be associated with the innovativeness of the opportunity identified but found no support for this hypothesis.

Third, and based on literature that suggested that there is a potential difference between technology and non-technologically oriented venturing efforts, we hypothesized that the relationship between the entrepreneurs’ opportunity identification process and the type of opportunity identified would be moderated by the technology orientation of the venture (H3), and that the relationship between prior knowledge and the type of opportunity identified would be moderated by technology orientation of the venture (H4). Results suggest that neither of these hypotheses were statistically supported. Interestingly however, when looking at technology oriented nascent venturing efforts, and running the model that contained the interaction term, we did find marginal statistical significance for both hypothesis H3 as well as hypothesis H4.

One reason for these unexpected finding and the potential limitation it represents could be that the use of a formative measure fails to accurately capture the nature or fullness of the entrepreneurial construct. Simply put, the methodological use of formative versus a reflective measure undoubtedly introduces the potential for the issue of measurement error to exist.
However, given the measure was developed based upon prior investigations (i.e., Samuelsson & Davidsson, 2008; Smith et al., 2009), we believe this suggests that one potentially fruitful direction for future researchers revolves around further exploring and examining the dimensionality of “opportunity” as a construct. For example, future researchers may want to explore how the relationships that other constructs known to be related to entrepreneurial opportunity compare with those demonstrated through the measure utilized in this study.

Although based on a nationally representative sample, it is also important to note that the findings reflected in this investigation are limited in that they reflect a U.S. base population. This suggests that it remains possible that the present results may not generalize to other cultures. Consequently, future research is necessary to address the potentially important cross-cultural possibilities.

7. Conclusion and Implications

While debate clearly continues to focus on the role innovation plays in as a determinant of the distinctiveness of entrepreneurship as a discipline, it is increasingly argued that a fundamentally important issue in its own right revolves around the degree of opportunity novelty as a basis for firm founding (Bhave, 1994; Cliff et al., 2006; Davidsson & Wiklund, 2001; Shepherd et al., 2000; Zimmerman & Zeitz, 2002). Our paper points out that unraveling the interdependencies of the various relationships may be more complex than earlier research has suggested. For example, despite studies suggesting that passive and systematic forms of search activities may lead to different types of opportunities, our findings do not suggest the existence of a systematic relationship between the opportunity identification process and the types of opportunities identified. By contrast, possessing a greater breadth of heterogeneous prior knowledge does appear to provide a basis for identifying more innovative opportunities. Perhaps
more interesting, the effect of prior knowledge heterogeneity appears to hold regardless of whether or not a passive or active approach to identifying opportunities is taken.
References


**Figure 1 – Proposed Relationships**

**TABLE 1: Means, Standard Deviations and Correlations - All Nascent**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity type</td>
<td>0.35</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Opportunity</td>
<td>3.27</td>
<td>0.79</td>
<td>.012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Prior knowledge</td>
<td>3.14</td>
<td>0.80</td>
<td>.159</td>
<td>-.022</td>
<td></td>
</tr>
<tr>
<td>heterogeneity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

**TABLE 2: Results of Multiple Regression Analyses Predicting Opportunity Type * - All Nascent**

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Model</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>1</td>
<td>-.022</td>
<td>.331</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>2</td>
<td>.158***</td>
<td>.523**</td>
</tr>
<tr>
<td>Opportunity identification process X</td>
<td></td>
<td></td>
<td>-0.499</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model F value: 3.448**  3.012**

R²: .025  .033

*a n = 272. Standardized regression coefficients are shown.
*** p<.01; ** p<.05; * p<.10
### TABLE 3: Means, Standard Deviations & Correlations

**Technology-Oriented Nascent Venturing Efforts**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity type</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Opportunity identification process</td>
<td>3.30</td>
<td>0.71</td>
<td>.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Prior knowledge heterogeneity</td>
<td>3.04</td>
<td>0.98</td>
<td>.250**</td>
<td>.011</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

### TABLE 4: Means, Standard Deviations & Correlations

**Non-Technology Nascent Venturing Efforts**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>s.d.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opportunity type</td>
<td>0.27</td>
<td>0.44</td>
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<tr>
<td>2. Opportunity identification process</td>
<td>3.27</td>
<td>0.83</td>
<td>-.017</td>
<td></td>
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<tr>
<td>3. Prior knowledge heterogeneity</td>
<td>3.16</td>
<td>0.76</td>
<td>.083</td>
<td>-.014</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.01; ** p<.05; * p<.10

### TABLE 5: Multiple Regression Analyses

**Predicting Opportunity Type - Nascent Technology Entrepreneurs**

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>.065</td>
<td>.774*</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>.167</td>
<td>1.086**</td>
</tr>
<tr>
<td>Opportunity identification process X Prior knowledge heterogeneity</td>
<td></td>
<td>-1.188*</td>
</tr>
<tr>
<td>Model F value</td>
<td>1.419</td>
<td>2.158*</td>
</tr>
<tr>
<td>R²</td>
<td>.032</td>
<td>.072</td>
</tr>
</tbody>
</table>

* n = 272. Standardized regression coefficients are shown.  
*** p<.01; ** p<.05; * p<.10

### TABLE 6: Multiple Regression Analyses

**Predicting Opportunity Type - Nascent Non Technology Entrepreneurs**

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity identification process</td>
<td>-.046</td>
<td>.104</td>
</tr>
<tr>
<td>Prior knowledge heterogeneity</td>
<td>.149**</td>
<td>.290</td>
</tr>
<tr>
<td>Opportunity identification process X Prior knowledge heterogeneity</td>
<td></td>
<td>-.209</td>
</tr>
<tr>
<td>Model F value</td>
<td>2.182</td>
<td>1.516</td>
</tr>
<tr>
<td>R²</td>
<td>.024</td>
<td>.025</td>
</tr>
</tbody>
</table>

* n = 272. Standardized regression coefficients are shown.  
*** p<.01; ** p<.05; * p<.10
The Experiential Classroom Workshop
Chair: Dr. Michael Morris (Professor and Clinic Director at Oklahoma State University, Immediate Past-President of USASBE)

The Experiential Classroom Workshop has been designed as an extension to the annual Experiential Classroom event that has emerged as one of the most popular clinics dedicated to sharing leading-edge teaching practices and enhancing teaching skills. More than 700 faculty from around the world have attended the Experiential Classroom over the past 10 years. This workshop will focus on helping those who are new to the teaching of entrepreneurship, including both faculty and practitioners, to learn best classroom practices and a number of highly creative and effective experiential approaches, ranging from cases, business plans, and the use of entrepreneurs in the classroom to having students conduct entrepreneurial audits, the concept of marketing inventions and consulting engagements. Participants will be able to talk directly with program leaders and find more information about attending the Experiential Classroom XI in September 2010.
Research Opportunities with the Panel Study of Entrepreneurial Dynamics (PSED): An Introduction

Chair: Paul Reynolds (Co-Principal Investigator: PSED I, II)

The two Panel Study of Entrepreneurial Dynamics [PSED] cohorts provide detailed descriptions of business creation in the United States. Both cohorts are representative samples of U.S. nascent entrepreneurs. The PSED I sample is based on screening completed in 1998-2000 and the PSED II sample was identified in 2005-2006; there have been three annual follow-up interviews with both cohorts. These public data sets [www.psed.isr.umich.edu] are the only sources of longitudinal information on national samples of the business creation in the United States. There are many factors and processes associated with implementation of a profitable new business. The two PSED data sets provide extensive opportunities for analysis. This workshop will provide an overview of the major features of the research protocol, describe the data sets, review the issues critical for the analysis, and discuss some preliminary findings.
ICSB eForum on Open Innovation
Chair: Oyvin Kyvik (Director of Kyruco Investments A.S., Norway and Director of Pro-Ex International, S.L., Spain)

Innovation has long been recognized as a key driver of entrepreneurship and economic growth. In the 19th and 20th centuries innovations were seen primarily as products and processes to be guarded, lest they be stolen and copied by competitors. Patents and copyrights gave some protection, but sometimes the innovation was seen as so important that its basic nature must be kept secret. This process of “closed innovation” sees maintaining control as a central concern. While this worked well for quite a while, the very nature of how entrepreneurial organizations create new ideas and develop them into marketable products and processes has, in the 21st century, changed. This is because control and secrecy now hinder rather than protect innovation. Individuals and organizations are no longer isolated; we are now connected with the ability to communicate instantly with almost anyone anywhere. This has led to a change in the basic approach to innovation, now labeled “open innovation.”

The ICSB eForum on Open innovation will explore the concept of open innovation and examine its current and future developments.
Journal of Small Business Management (JSBM) Reviewer Workshop for Younger Researchers
Chair: David Smallbone (Professor and Associate Director of the Small Business Research Centre at Kingston University; JSBM Associate Editor; ICSB President-Elect)

The JSBM Reviewer Workshop has been established to train new and potential reviewers, with a specific focus on younger researchers. Chaired by JSBM Associate Editor David Smallbone, this workshop will include the participation of experienced reviewers and editors, such as JSBM Editor-in-Chief George Solomon, who will talk about their own experiences as reviewers for high-quality journals and also give constructive feedback to inexperienced reviewers who wish to strengthen their skill set. The editors will also discuss the expectations of reviewers and how you can fit in.
“Like an Artist, like a Poet”

– Understanding, and Improving, Entrepreneurship Through Art

Jacqueline Fendt

Abstract

This is a positioning paper about relationships between art and entrepreneurship, and in particular entrepreneurial learning and becoming. It proposes a number of theoretical and conceptual links between art and enterprising. It is suggested that art can be a source of inspiration for many elements of entrepreneurial agency, such as the capacity to recognize and act upon opportunity, to create, to innovate, to frame, to raise funds, to bootstrap, to manage ambiguity, to persist in the face of adversity, etc. and that entrepreneurs can in many ways be viewed as artists. The paper aims to exchange about relationships between art and the entrepreneurial process, away from classical equilibrium-based understandings, toward creative process views inspired from a broad range of relevant and seemingly irrelevant perspectives. This is work in progress.

Setting the Scene

“We are <giving responsibility> to new people, with new ideas; entrepreneurs, not MBAs... people who really look at, feel, touch the market. Creative people, artists, not businessmen. And you have to bring in new, young people who do not sit before a computer at the bank and try to make money with shares. I have my philosophy about entrepreneurs. An entrepreneur is always also an artist who creates products, who creates jobs and communicates it to the people. Picasso was an artist who was an entrepreneur. In Swatch Group, entrepreneurs are running the show and not financiers. I threw out every banker that worked for our company”. Nicolas Hayek, President of Swatch, in a TV interview, 2009

Think different. Apple Computers, tag line

What is the essence of entrepreneurship? Is it the “pursuit of opportunity” beyond available resources (Stevenson 2000) … Or is it “ away of thinking and acting, that is
opportunity obsessed (…) with the purpose of value creation” (Timmons 1994) a “…a subversive activity (that) upsets the status quo, disrupts accepted ways of doing things, and alters traditional patterns of behavior” (Smilor 1997)? What opportunity? What value? What behavior? And how can entrepreneurship be learned or, for that matter, taught? Recently, educational programs devoted to entrepreneurship have proliferated at business schools, from a handful in the 1980s to over 1600 in 2005 (Kuratko 2005). Such programs are today almost all built around a core module that seeks to simulate some type of venture creation: student teams are put together and, following a number of courses, are instructed to identify a market opportunity, develop a corresponding business model, build a community of stakeholders around their nascent project, write up a business plan and finally pitch before a jury, usually made up of entrepreneurs, investors and lecturers. Research proposes situated learning, ‘emotional exposure’ (Pittaway and Cope 2007), an experiential transformation process (Politis 2005), exposure to discontinuation, to crises (Cope 2005; Deakins and Freel 1998; Taylor and Thorpe 2004), and to extreme time pressure (Smilor 1997:334). Students should step outside their ‘reality as a student’ (Pittaway & Cope 2007:227) and actively engage in becoming ‘insiders’ (Brown & Duguid 1991:48). But insiders of what? The term value in the “…purpose of value creation” (Timmons, 1994) inherent in many entrepreneurship definitions is today more often than not interpreted – and taught –, from a purely economic perspective.

This stance, and a malaise that we share with a growing number of scholars with the reigning unified thought about education methods in entrepreneurship (and management for that matter) leads us to continuously experiment with novel pedagogic elements, involving individual and collective reflections on the self, on societal leadership, on moral agency in enterprise, and on the general development of a social culture (Raelin 1997; Raelin 2000).
Very often, this search leads us to grapple with art.

We start this paper with a succinct overview of the field of entrepreneurship and we then briefly frame our understanding of art. Based on this theoretical underpinning we propose and discuss some key relationships between the two fields. We suggest that art can be a source of inspiration for many elements of entrepreneurial agency, such as the capacity to recognize and act upon opportunity, to create, to innovate, to frame, to raise funds, to bootstrap, to manage ambiguity, to persist in the face of adversity, etc. and that entrepreneurs can in many ways be viewed as artists. After that, we zoom on what we consider to be the most striking common base, the need for paradigm-changing thought and agency, and we argue our case. Based on this, we evoke some propositions on pedagogic content and form for the learning and teaching of enterprise at business schools. This is work in progress and we forward it in the hope for dialog. We believe that objectivity does not repose on the lone shoulders of each author, but that it results from the interplay, and the dialog (Sachs 2003). If one is wrong, there surely is someone out there to point this out. If somebody bothers to answer, then the paper did stimulate somebody somewhere and thus fulfilled its most noble mission.

**On Entrepreneurship**

“Entrepreneurship is a subversive activity. It upsets the status quo, disrupts accepted ways of doing things, and alters traditional patterns of behavior. It is, at heart, a change process that undermines current market conditions by introducing something new or different in response to perceived needs.” Raymond W. Smilor, Kauffman Foundation, 1997

At Harvard, in 1983, entrepreneurship was described as “an intellectual onion”: “You peel it back layer by layer and when you get to the center, there is nothing there, but you are crying (Stevenson 2000).” This remark reflected a long-standing set of complaints by thought
leaders around the 1970s (Drucker 1985; Kirzner 1973) regarding the lack of a theoretical framework of this field of thought. Since the 1980s, studies have begun to show the vital importance of ventures and small business in job creation (Birch 1987), and a change in the sociology of entrepreneurship has soon followed, not only in the USA, but in many parts of the world (Thornton 1999), including Europe. Since the 1990s entrepreneurship is occurring at a higher rate (Gartner 1990) and with more capital behind it that at any time in the past century (Gompers et al. 2005). Today, the progress of entrepreneurship as a scholarly and educational field has been “enhanced by the societal environment in which it flourished and by the strong development of theoretical underpinnings (Stevenson 2000:1).

Entrepreneurship is increasingly recognized as a powerful stimulus for value creation at individual, company and societal levels. Within companies, entrepreneurial action results in product, service, process, and administrative innovations (Lawler 1987; Levinthal 1996; Miles and Covin 2002; Schumpeter 1934). From such actions then emerges strategic renewal (Hitt et al. 2001; Ireland et al. 2003a) and different types of value for various stakeholders (Hitt, Ireland, Camp, & Sexton, 2001). To society, entrepreneurship contributes through employment creation (Zahra et al. 2001; Zahra et al. 1999), technological progress, economic revitalization (Birley 1986 Zahra, 2005) and cultural change (Carayannis et al. 2003; McGrath et al. 1992; Young and Sexton 1997). Significant emergence of entrepreneurship education as a distinct field began in the 1980s (Kuratko 2005, Zeithaml & Rice 1987). Business schools worldwide are increasingly aware of the need to facilitate their students’ access to this alternative life trajectory to the classical corporate executive career. Over 1600 entrepreneurship programs had been developed worldwide by the year 2000 (Katz 2003) and the number is increasing. Downstream value chain issues such as venture capital, angel financing and other financing techniques, and the need for effective networking and
communication to obtain these, emerged in the 1990s (Dimov and Shepherd 2005; Lévesque et al. 2009; Shepherd and Zacharakis 2001; Shepherd and Zacharakis 2002).

However, for a field to be considered a field, and to be taught, there should be some kind of consensus of what exactly it entails. This does however not seem to be the case for entrepreneurship. Entrepreneurship is a “widely dispersed, loosely connected domain of issues “ (Ireland and Webb 2007), a “mosaic of issues to be explored” (Zahra 2005:254). It displays eclectic and pervasive advantages and for that reason attracts researchers from diverse disciplines, for example accounting, anthropology, economics, finance, management, marketing, operations management, political science, psychology and sociology. The domains of Management and of Entrepreneurship are often compared and are defined today as neither mutually inclusive nor exclusive. Their relationship is described as overlapping (Hitt et al. 2001; Ireland and Webb 2007). The former is considered more opportunity-driven, the latter is more resource- and “conversation”-driven (Ireland, Hitt and Sirmon 2003). The relation between Strategy and Entrepreneurship is sometimes discussed. Entrepreneurial strategies have been identified and shown to have important common denominators, issues, and trade-offs between entrepreneurship and strategy (Hitt et al. 2001) and this has yielded the field of strategic entrepreneurship, a unique distinct construct through which companies can create wealth. It is composed of an entrepreneurial mindset, an entrepreneurial culture and entrepreneurial leadership, and of the “strategic management of resources and creativity to develop innovations” (Ireland et al. 2003:963). Corporate entrepreneurship and the need for internal corporate venturing have also gained much attention during the past decade(Kuratko et al. 2001; Miles and Covin 2002; Morris and Kuratko 2002; Zahra et al. 1999). On a micro-level, many diverse types of entrepreneurs and the equally diverse methods they use to
achieve success have motivated much research on psychological aspects (Kickul and Gundry 2002). Such concepts as entrepreneurial spirit, entrepreneurial mindset and entrepreneurial culture are growing area of interest all over the world (Buchholz and Rosenthal 2005; Fayolle 2000; Gartner et al. 1992; McDougall and Oviatt 2003; Minniti 2005; Zahra et al. 2001). The concept of risk and trade-offs in entrepreneurship – particularly its demanding and stressful nature – have also been intensely researched (McGrath, MacMillan, & Scheinbert 1992). Women and minority entrepreneurs have emerged and been inquired. They appear to face different kinds of obstacles and opportunities (Chaganti and Greene 2002; Greene et al. 2003; Gundry and Welsch 2001). On the macro-level, the economic and social contributions of entrepreneurs, of new companies, of small and midsize enterprises (SME) and of family businesses has been shown to be disproportionately high regarding employment creation, innovation, and economic renewal, compared with the contributions of top 500 companies (Aldrich 1999; Chrisman et al. 2003). Last but not least, ethics and entrepreneurship, sustainable entrepreneurship and social entrepreneurship have become a fast growing area of research, partly due to recent systemic deficiencies of the classic capitalist systems and resulting scandals occurring in large corporations, partly due to an increased conscientization regarding ecological and societal issues (Bucar and Hisrich 2001; Buchholz and Rosenthal 2005; Carter 2007; Kuratko 2005; Morris et al. 2002).

For the purpose of this paper we focus on the theoretical body of entrepreneurship that addresses consideration of the motivations of people to become entrepreneurs, and to make entrepreneurial decisions. Major characteristics and motivations that influence the entrepreneurial process, as prior researchers have suggested, are: i) need for achievement, ii) locus of control, iii) risk-taking propensity, iv) tolerance of ambiguity, v) ambidexterity and
vi) Type A behavior, including competitive, restless striving and constantly struggle against all types of limitations, such as time (Begley and Boyd 1987) and resources (Stevenson 1983). These behaviors are widely regarded as hallmarks of entrepreneurial agency – and these behaviors, we found, are also widely prevalent in artistic agency.
**On Art**

If you cannot say it, point to it. *Ludwig Wittgenstein*

Art is not a handicraft, it is the transmission of feeling the artist has experienced. *Leo Tolstoy*

And so each venture
Is a new beginning, a raid on the inarticulate
With shabby equipment always deteriorating
In the general mess of imprecision of feeling,
Undisciplined squads of emotion. And what there is to conquer
By strength and submission, has already been discovered
Once or twice, or several times, by men whom one cannot hope
To emulate – but there is no competition –
There is only the fight to recover what has been lost
And found and lost again and again: and now, under conditions
That seem unpropitious. But perhaps neither gain nor loss.
For us, there is only the trying. The rest is not our business.
*T. S. Eliot*

“I always took for granted that the best art was political and was revolutionary. It doesn’t mean that art has an agenda or a politics to argue; it means the questions being raised were explorations into kinds of anarchy, kinds of change, identifying errors, flaws, vulnerabilities in systems.” *Tony Morrison* (Bogart, 2007:1)

**Framing**

We shall not even attempt to define art here: this is an ongoing project of study, thought and inquiry, ever since man exists and creates, and, in a sense, arts’ definition and redefinition, is part of art. The study of the meaning of art is a philosophical branch, aesthetics, in its own right (Levinson 2003). We shall just, in a few words, frame what we address when we speak of art, or the arts, in this study. We shall here address the act (or process) – and/or of the product – of deliberately arranging elements with the intention to affect thought, senses and emotions. We think of diverse range of human activities, creations, and modes of expression, including music, poetry, film, literature, theatre, photography, installations, sculpture, paintings, video, Internet and mobile device art, and more. We also think, with Tolstoy, of art as a use of indirect means to communicate from one person to another (Tolstoy 1897). Art as *mimesis* or representation has roots in the philosophy of Aristotle. Kant, and later Fry, Bell, Adorno, Merleau-Ponty, Lyotard and others brought us
theory (Adorno 1959; Adorno 1969; Andersen and Oxvig 2009; Grosz 2008; Lyotard 1983; Merleau-Ponty 1960), Heidegger brought us an interpretation of art as a political weapon, as a means by which a community self-expresses and frames itself (Heidegger 2001). Britannica online brings forward "the use of skill and imagination in the creation of aesthetic objects, environments, or experiences that can be shared with others." Defined in this way, artistic works have existed forever. The first and broadest sense of art is its Latin translation of "skill" or "craft." Artifact, artificial, artifice and many more uses bear some relation to its etymology.

**Purpose**

Another, more recent definition is of art is as an abbreviation for creative art(s) or fine art(s) defining competencies put to use to express creativity, or to engage others’ aesthetic senses. Depending on the perception of the finesse applied, and of whether the creation has a practical use or not, such works will be labeled crafts, or applied art, just as, when used deliberately commercially, the term commercial art is used. These distinctions on issues of purpose, which are highly definitional and have their origins in human beings’ different paradigms and perceptions, are especially interesting because a frequent metaphorical connection and/or a proposed relationship between entrepreneurship and art is likely to evoke this apparent dichotomy that one type of creation (art) is – or even must be – completely free, pure, devoid of any utilitarianism, essential; for the sole purpose of beauty, of the gesture - whereas entrepreneurial creation is for the purpose of material gain, of profit. However, art often has goals beyond pure creativity and self-expression. The purpose of art is manifold and includes the wish to communicate ideas, such as in politically-, minority-, spiritually-, and/or philosophically-driven art (Comisso 2000; Danesi 2008; Debord 1961; Debord 1997); to
create essence, beauty, pleasure; or to provoke emotions of all kinds. The purpose may also be none, or, on the other end of the scale, totally commissioned by a third party. Some areas of entrepreneurship are naturally mixing with art: in advertising, skills and disciplines collide and collaborate: writers, artists, dramatists, salesmen, marketers, psychologists, statisticians, media analysts, entrepreneurs, etc. Professionalism and societal responsibility must be defined in terms applicable to each of these; roles relate to others – and to the whole. Each must feel responsible for the consequence – profits, sales, and societal impact – of his action. There is much to be learned, here. In sum, material, constructive, destructive, healing, subversive and other transactional transformational purposes (Barthes 1957) are perfectly common to art. We identify intentional, conscious actions to bring about change, to comment on aspects of society – or to want to change it, more or less radically and anarchically (Barnard 2004; Berkowitz 1999; Chollet 2004); agency that aims to address discrimination, to bring to light minority issues, to simply communicate (Mithen 1999), to entertain, or to sell something, outright.

Much as entrepreneurship, therefore, art is eclectic, lacks a theoretical framework, and can be perceived in endless ways, for example as an activity compelled by personal need to express oneself, as a discipline of inquiry, or rather many disciplines, a discipline of production, a study of creative skill, a creative process, a product, a work, an object; but also as an echo, as the receiver’s perception of the creative act or the produced object. The arts discipline) are a collection of disciplines (arts) that produce artworks (art as objects) that are compelled by a personal drive (art as activity) and echo or reflect a message, mood, or symbolism for the viewer to interpret (art as experience). Artworks can be defined by purposeful, creative interpretations of limitless concepts or ideas in order to communicate
something to another person. Artworks can be explicitly made for this purpose or interpreted based on images or objects. Art, as we use it for the sake of this exploratory thought paper, includes all these prisms and others that may come up as we think along.

**So Why Art and Entrepreneurship?**

“I don’t want you to think of this as just film… no, listen to me, we’re here to make a dent in the universe. Otherwise why even be here? We’re creating a completely new consciousness. Like an artist, or a poet. We are rewriting the history about human thought with what we’re doing. That’s how you have to think of this…” *(attributed to)* Steve Jobs, speaking to Ridley Scott, *in the opening sequence of the movie “Pirates of Silicon Valley”, 1999.*

“I’m a deeply superficial person.” *Andy Warhol*

"Your pen will be consumed before you have fully described what the painter presents to you immediately using his science: and your tongue will be paralyzed from thirst and your body foreworn with sleepiness before you will be able to represent in words what the painter shows you in an instant.” *Leonardo da Vinci, Treatise on Painting, 1680*

“First, we believe that the world must be changed. We desire the most liberatory possible change of the society and the life in which we find ourselves confined. We know that such change is possible by means of pertinent actions.” *G. Debord, introd. to Report on the Construction of Situations, McDonough, 2004:29*

It is the entrepreneurs themselves that first gave us the idea. As in some above citations of Steve Jobs (Apple) and Nicholas Hayek (Swatch), the metaphor of the artist plays a recurrent role in many autobiographies, interviews and other interactions with entrepreneurs. Many entrepreneurs like to see themselves as artists and we wanted to know why. As we began to study the phenomenon, we found both a budding body of research in management science grappling with art and, vice versa, some rapprochement from the arts toward management and organization science, the most developed being the interface treating the management of the arts (institutions). Still, with this latter exception, for the most part of the literature, management remains in the management corner and art literature firmly concerned with art. But theory on arts can be a source for inspiration for management science scholars – and more particularly so for entrepreneurship scholars. Beyond the numerous
references to the nonconformity of both (Smilor 1997), the part of rebellion, of norm-transgression (Miller et al. 1997), of avant-garde, of work at the liminal (Turner 1974) and in the interstices of conventions and systems (Hjorth 2004; Hjorth 2007), we find that there are endless parallels and associations waiting to be studied. Too many phenomena ring a bell, many conditions for agency are very similar, too many concepts, constructs and theories seem to directly address entrepreneurial issues. We purport, for the sake of debate, that entrepreneurs and artists can learn from each other, and that entrepreneurs can in many ways be viewed as artists. Some – non exhaustive – examples:

**Context**

Reframing is telling the truth as we see it – telling it forcefully, straightforwardly and articulately, with moral conviction and without hesitation. The language must fit the conceptual reframing, a reframing from the perspective of progressive values. It is not just a matter of words, though the right ones are needed to evoke progressive frames. George Lakoff.

The present economic crisis (2008-2010) is a wake up call and many of us are clearly asking new questions and seeking new answers – and, one could argue, that is exactly art’s business! But also that of entrepreneurs, who seek and build opportunities in the yet undefined spaces between a world in place and a world to come. Phenomena and concepts worth examining as avant-garde, ways-of-seeing, activist art, art embodied, moral aesthetics, collective memory, presentational knowing, etc.

**Content and Meaning**

Art asks essentially some of the same questions than entrepreneurship regarding content: are you truly creating value? Are you privileging content over form, or form over content, e.g. over or underselling? Content is the matter contained by form, the meaning, the sense, the message contained within a receptacle. This receptacle can be a physical container,
or a story, a metaphor; a business plan. Just as in business school classrooms, conservatories teach some form of technique, or, as Bogart explains, “…a very watered-down idea of technique, but young theatre artists are rarely encouraged to grapple or wrestle with issues and content. They are taught how to tackle a character in a play, but they are not asked; ‘what is a play?’, ‘what is its function?’, ‘what does this play mean now?’, why is it necessary?’” (2007). This rings a bell with entrepreneurship education as explained earlier. In order to examine issues about content and meaning, Bogart suggests five themes: i) begin with necessity, ii) develop perception (fight numbness: remember that the purpose is to wake people up, so learn to see and sense beyond routine), iii) find out what is missing (ours is a culture of excess, we are cluttered with too many material things and with counterfeit emotions. What is lacking, what is missing? Start from there.), iv) learn what you need now (what do you need to know about the world in order to share what you must and want to share: learn it now) and v) develop patience give the time needed for creation). (Bogart 2007:109). These themes, expressed in other, more entrepreneurial terms – for example stay hungry, have a unique selling proposition, focus on a niche, recognize opportunity, exploit the strategic gap, etc. seem to apply almost one to one to entrepreneurship.

**Purpose: Survival, Profit, Altruism and Wanting to Change the World**

And so each venture
Is a new beginning, a raid on the inarticulate
With shabby equipment always deteriorating
In the general mess of imprecision of feeling,
Undisciplined squads of emotion. And what there is to conquer
By strength and submission, has already been discovered
Once or twice, or several times, by men whom one cannot hope
To emulate – but there is no competition –
There is only the fight to recover what has been lost
And found and lost again and again: and now, under conditions
That seem unpropitious. But perhaps neither gain nor loss.
For us, there is only the trying. The rest is not our business.

*T. S. Eliot*
Entrepreneurship educators are faced with ever more students wishing to engage in something that has become known as social entrepreneurship. Indeed, today we distinguish social entrepreneurs – who use entrepreneurial principles to organize, create and manage ventures to make social change, and assess success in terms of impact on society as well as profit – and business entrepreneurs who typically measure performance solely in profit and return. It is possible that this distinction might fade. We argue that artists have by definition always had to align a devotion to art for art’s sake and the economic need for self-management, and could inspire us here. On the other hand, while not every baker, ironmonger, car industry supplier or tax advisor wants to change the world, many entrepreneurs do. In the vein of the Steve Jobs quote at the beginning of this paper, many entrepreneurs are on some kind of mission. And their notion of ‘value creation’ is often more holistic than just economic. Artists ‘make worlds’, and in a sense so do entrepreneurs. This statement invokes the utopian image of the ‘modernist innocence’ of the artist. For a while this image given way to one of a artist under the pressure and the manipulations of the cold and calculative logic of the ‘dominant neoliberal economism’. It was regretted that the artist be ‘…transformed into an entrepreneur conjuring all kinds of strategies in order to be visible just for a few minutes’ (Madra 2009). This absolutist, dichotomous perspective of the two worlds has somewhat changed. We purport that while it can be asserted that the artist is an individual who has the ability to change the world or at least, more cautiously, that artists are individuals who believe they can change the world, this also goes, in a sense, for entrepreneurs.

Use of Resources

The Internet brings about a phenomenal process of dematerialization. This and low
communication costs provoke – and permit, to speak in terms of opportunity – structural decentralization. This sets completely new demands upon entrepreneurs, and opens new doors: they do not need to produce anything but can build entire companies by buying and combining all types of services. Identification, smart assembly, dynamic organization and adaptation of product and service components, but also of people, can best be compared to the work of a collagist, a composer, or a conductor. To bring people into new arrangements one needs to be acutely aware and sustainably respectful of their physical, emotional and mental dispositions.

**Attitude, Disposition, Authenticity, Fragility**

The most demanding part of living a lifetime of an artist is the strict discipline of forcing oneself to work steadfastly along the nerve of one’s own most intimate sensitivity. *Anne Truitt*

Things are not difficult to do; rather what is difficult is to put yourself into a state to do them. *Constantin Brancusi*

Sustainably value-creating entrepreneurs must be authentic, construct that directly applies to works of art, (considered ‘authentic’ if its origins, authorship, provenance etc. can be identified) and of the artwork’s character as an expression of the artist’s and/or society’s, values and beliefs. For example rap artists engage in distinct discourses to find a dialectic between the unique and the mundane, between succeeding—makin’ it—and remaining loyal to the values of your community or culture—“keeping it real” (Sköld 2007).

**Experiential Learning, Cognition and Emotion**

Art is most pleasurable not when it closes us down, narrows our perceptions and sympathies, draws boundaries of appropriateness or goodness, but when it opens us up. *Charles L. Mee Jr.*

A man gains awareness of what he is through his selfhood in a world in which he plays an active part. He is one who has learned that he completely loses insight into the general course of affairs, if he tries to stand outside as a mere spectator aspiring towards a knowledge of the whole. *Karl Jaspers, Man in the Modern Age, 1931*
Entrepreneurial agency necessitates a behavior based on both cognition and emotion, i.e. to think and act with both brain halves. Societal changes must be anticipated, talent must be translated into economic value, stakeholders must be mobilized, and sense-making metaphors, storytelling – key artistic techniques – play a role (Downing 2005; Fletcher 2007; Fletcher and Watson 2007; Hill and Levenhagen 1995; Hjorth 2007; Martens et al. 2007). Musicians, painters, designers, playwrights, actors are increasingly involved in enterprise, not only in promotion, but in the act of conception and production. Many startups, micro-enterprises, freelancers, make their competitive advantage a distinctive appearance, form, content, sound, etc. that they embed or embody in products or services.

**Anticipation, Opportunity Recognition**

> The moment one gives close attention to anything, even a blade of grass, it becomes a mysterious, awesome, indescribably magnified world of itself. Almost an “unrecognizable” world. *Henry Miller*

> One can travel the world and see nothing. To achieve understanding it is necessary not to see many things, but to look hard at what you do see. *Giorgio Morandi*

> To take photographs means to recognize (...) both the fact itself and the rigorous organization of visually perceived forms that give meaning. It is putting one’s head, one’s eyes and ones heart on the same axis. *Henri Cartier-Bresson."

The recognition and pursuit of opportunity is a central construct of entrepreneurship (Baron 2006; Fendt and Bureau 2010; Stevenson 1983; Timmons 1994). What if it had to do with capacity to anticipate paradigmatic change, to associate the unassociated, to recognize parallels, to perceive the common in an uncommon way?

**Entrepreneurial Artist, Artistic Entrepreneur**

> I once considered fundraising an obligatory activity divorced from the artistic process. I have come to understand that fundraising can, in fact, be part of the creative act. Fundraising is an action that can help to speak the project into existence.” *Anne Bogart (Bogart 2007:27)*
Artists themselves, be they Madonna, or Andy Warhol, the latest boys band or less spectacular players, are most likely organized as entrepreneurs and they create value – and a living for themselves and sometimes impressively many others – by sharing and exposing their fragility on the one hand and through vision, business acumen, understanding of the customer and industry, leveraging competencies, continuous renewal – and some degree of sometimes very surprising but effective resource organizing, ranging from what has come to be known in entrepreneurship as “bootstrapping”, to often highly streamlined innovation-generating industries.

Architecture as an Organizational Construct

Other phenomena resemble structural principles of architecture. Informatics, the home base of many modern entrepreneurial ventures, is a structural and coordinative science and the analysis, association and transfer of structures from one discipline to another is a core competence.

Doing It – And the Contrary of It

Float like a butterfly, sting like a bee. *Muhammad Ali*

The grace of human life is not to lack insecurities, but to turn them to good use. *Julius Novick*

The art of theater is about living outside your own skin and identifying with the ancestors who empower you to speak. Articulate, describe, redescribe, find your own words, finish sentences, transform the irritations of daily life into expression, point, signal in the face of the ephemeral, frame what you believe and say it well. And this is why the theater keeps on compelling artists and audiences to gather together. We are asked to stand up in the present moment and to speak courageously for those who came before, to speak against familiar currents, from a state of imbalance and as articulately as we can manage.” *Anne Bogart* (2007:29)
Time is the school in which we learn. Time is the fire in which we burn. *Delmore Schwartz*

He takes a step back,
He’s under attack
He knows that no one can touch him now
He seems so at ease
A strange inner peace,
It’s all that he’s feeling somehow.
He’s got all kinds of time,
He’s got all kinds of time
All kinds of time… *Song Lyrics of “All kinds of time” by Fountains of Wayne, 1996*

Paradoxes, dilemmas and (true and false) dichotomies of all types are the playgrounds from which entrepreneurial agency and artistic oeuvre emerge alike. The dichotomy between work as a managerially ordered place and conditions for creativity within such an order calls for temporal, spatial, sonar, visual, haptic concepts to create space for play. Traditionally, in management science, practices and theories remain by and large embedded in classical paradigms of hierarchy and bureaucracy. More broadly, managers live in a world of opposites such as formal vs. informal organization (Roethlisberger and Dixon 1939) mechanistic vs. organic (Burns and Stalker 1961), open vs. closed systems (Katz and Kahn 1966), organizational dilemmas (Bradach and Eccles 1989; March 1991; Tushman and Smith 2002), centralization vs. decentralization (Bartlett and Ghoshal 1998), short-term or long-term (Crossan et al. 2008; McGrath et al. 2001), global efficiency and country sensitivity (Bartlett 1986; Bartlett and Ghoshal 1998; Doz and Prahalad 1986; Harzing 2000; Prahalad and Doz 1999), stability vs. change, inner vs. outer direction, and so on. These and other opposites – the most highly cited now being March’s (1991) exploitation vs. exploration – are often viewed as dilemmas.

Time is the school in which we learn. Time is the fire in which we burn. *Delmore Schwartz*

He takes a step back,
He’s under attack
He knows that no one can touch him now
He seems so at ease
A strange inner peace,
It’s all that he’s feeling somehow.
He’s got all kinds of time,
He’s got all kinds of time
All kinds of time…

*Song Lyrics of “All kinds of time” by Fountains of Wayne, 1996*

Such structures and models force executives to go in for all kinds of trade-offs, often under extreme time constraint and on the basis of insufficient data. De Witt and Meyer (1999) suggest that these and similar opposites confront managers with ‘paradoxes’. The prevailing solution to dilemmas advocated is ‘balance’ (Bradach 1997) or ‘optimal mix’ (March 1999) i.e., attempt to benefit from both sides by striving for some kind of synthesis (De Witt & Meyer 1999), or pursuit of ‘synergistic dynamics’ (Christensen and Foss 1997). The problem is that balance between poles like globalization and localization or exploitation and exploration is ‘impossible’, as March (1999) puts it. Scholarship is unanimous that such linear practices and theories are inadequate (Anderson et al. 1999; Beckham 2002; Brown and Eisenhardt 1997; Doz and Prahalad 1986; Osborn 2008; Osborn et al. 2002; Osborn and Hunt 2007; Schoonhoven and Jelinek 1990; Thomas et al. 2005; Weick and Sutcliffe 2001), especially in knowledge economies, which emphasize decentralized organizations and coevolutionary ecologies (Lichtenstein et al. 2006; Uhl-Bien et al. 2007).

An emerging body of research speaks of ambidexterity (Probst and Raisch 2005; Tushman and O'Reilly 1996) as the capability to ‘be both’ of two opposites. Both in art and in entrepreneurship we find such ambidexterity. Our brief narrative analysis has yielded that as management practitioners, and scholars, entrepreneurs find it hard to understand and manage nonlinear phenomena. When the entrepreneurs we met explain their ambidextrous agency, it seems like an evidence to them, as if they had ‘no choice but not to choose’. It is not that they particularly like complexity and ambiguity, nor risk-taking for that matter. On the contrary,
they prefer to shun these phenomena – but then do not. They describe a sort of incapacity to take either-or for an answer, to let go of either alternative, and therefore a necessity to hold on to them as long as they can! This is quite opposite to classic managerial behavior. Part of being a good manager is traditionally the capacity (implying the guts, the courage) to effectively and rapidly make (sometimes painful) decisions. When observing artists, and some entrepreneurs, at work and feeling the incredible tension inherent in some of their ambidextrous work, one wonders which approach takes more guts to do. To do it and the contrary of it seems a non-negotiable evidence in creative contexts. It is perceived as (or not) a hunting ground for opportunity and/or as a window to the future, to the next paradigm.

Both entrepreneurs and artists are often autopoietic (Maturana and Varela 1992) and self-organized (Kauffman 1993) and display dynamic capability. Dynamic capability transgresses the classic resource-based approach to coping with changing environments (Teece 2007). Eisenhardt and Martin observe that when markets are dynamic, ‘dynamic’ capabilities are: “simple, experiential, unstable processes that rely on quickly created new knowledge and iterative execution to produce adaptive, but unpredictable outcomes” (2000:1106). To Brown and Eisenhardt (1997) dynamic capabilities rely on ‘semistructures’ so as to avoid chaos and to allow new capabilities to emerge continually.

First Experiences, Emerging Hypotheses, and Further Research

Do I contradict myself? Very well then I contradict myself.
(I am a large, I contain multitudes). Walt Whitman

Trinity: “No one has ever done anything like this.”
Neo: “That’s why it’s going to work.” Dialog from the movie Matrix, 1999
From what we have studied and experienced so far, the craft entrepreneurship goes far beyond organized knowledge in the shape of the application of tools, models and methods. It involves the unleashing, transfer and socialization of independence and imagination. Imagination is composed of guessing, dreaming, recognizing, erring, doubting, supposing, trying and suchlike – much the opposite of what we teach at business schools. It necessitates human understanding that emerges from self-exposure, risk-taking, grappling, and therefore necessitates an atmosphere of generosity and trust. It involves work at the most intimate level of human beings, at the level of speech, of paradigm. If this is so, then the craft of entrepreneurship education must go equally far beyond the transmission of organized knowledge, such as business modeling, business planning, venture valuation, etc. One hypothesis that seems to emerge that to enable this type of deep level of change to occur, we should engage students in play: more precisely in the “subtle play of ideas through a process of paradigm shifting in which the conceptual lenses by which we apprehend the world is critically exposed and their consequences understood” (Chia, 1996:411). The essential knowledge is therefore a heightened sensitivity, a human understanding, a keen mind that is alert and receptive to the business opportunities likely to be hidden in the interstices between worlds and emerging from human interaction. Entrepreneurial opportunity is often hidden in the “inbetween”, in the gaps between homogenous and closed worlds. We purport that involvement with the arts can unleash the necessary associative capacity of becoming entrepreneurs. The arts are by definition inquiring disciplines, they frame, associate, anticipate and sense impulses better and earlier than other disciplines. The have an interest in “revealing the way micro-practices of ordering and organizing influence and shape our perception of reality (Chia, 1996).
Our educational practice is focused on *simplification* of the complexity, the multiplicity of phenomena into manageable ‘models’ and 'axioms', and from there into methods and tools. From the arts we can learn to *complexify* our thought and hence sensitize us to the subtle nuances of the world around us and to speculate and anticipate what is ahead. Chia calls this ‘heightened aesthetic consciousness’, and considers it crucial for the entrepreneurial imagination to flourish (1996). The truth does not exist as one thing; rather, it is a tension between opposites. Hegel stated that all human development is driven by the conflict of opposites, a dynamic he called dialectic.

To discover and better understand the discussed phenomena, and perhaps find some more, we have begun to invite art into our business school classrooms – and to set out, with our entrepreneurship students, to find art: in the cities, in business, in life. For example:

- we fully associate artists (painters, sculptors, film makers) and art and design students to our programs (final year master entrepreneurship major), both as faculty and students.
- We give formal assignments to students to express their experience of entrepreneurial becoming in poems, essays, collages, foods, sounds, etc.
- We invite entrepreneurs to our classrooms for testimonials. We film these, discuss them in small teams of scholars and students, and have begun some narrative analyses.
- We assign students to early-stage entrepreneurial ventures (usually ventures created by graduates of preceding classes), for interviews and for different types of consulting missions. We ask the students to translate their experiences in short video sequences.
• Last but not least, we regularly work with techniques originally applied by Dadaists and then refined by the Situationists International (SI) in the 1950s around Guy Debord, namely the creation of situation, the détournement (“the reuse of preexisting artistic elements in a new ensemble”, Knabb, 1981:67) and the dérive (drift; a “technique of rapid passage through varied ambiences” Knabb, 1981: 63). You could say that we practice a “détournement” (turn around, deviation) of Lettrist and Situationist practices for the purpose of a novel kind of entrepreneurship education. These methods were central to the Situationist movement and their intent to revolutionize art, and later society in its entirety. In a sense, this same intent is underlying here: to change entrepreneurship education, so as to change entrepreneurship, and ultimately society. In sum, we include in our pedagogic program a critique of current entrepreneurship education and some malaises experienced with methods and their application, drawing on the literature and on our own teaching and research experience and supporting our discussion with evidence from other scholars. This exercise that helps us complement – and sometimes escape from – the rational, predictive, deterministic entrepreneurial toolbox of business plan writing and so on, goes beyond the capacity of this paper and is described in separate studies (for example: Bureau and Fendt 2010).

These are first, encouraging experiences that are completely lacking academic validity for now. From a methodological viewpoint we are still reflecting on how to proceed. For now, we document in detail all processual and outcome-specific data, such as: assignments, results, immediate and deferred reactions, and so on. We aim to render our hypotheses more robust about parallels between the two described worlds. What can we learn for entrepreneurship from art? What essence, meaning, theories, behaviors and also techniques, could we adopt
from art, and from artists, and/or artistic movements, from music, poetry, from Impressionism, Expressionism, Dadaism, Action Art, Concept Art, the Movida, Jazz improvisation, Living Theatre, contemporary urban avant-garde projects, to name an insufficient few, and – last but not least – from life itself?

Chia purports that “…the cultivation of the 'entrepreneurial imagination' is the singular most important contribution university business schools can make to the world, and “…instead of the prevalent emphasis on the vocationalizing of business/management programmes in order to make them more 'relevant', university business schools should adopt a deliberate educational strategy that privileges the 'weakening' of thought processes so as to encourage and stimulate the entrepreneurial imagination” (1995:412. We adhere to this and would like to find out more about how to do this. This may require a fairly radical shift in pedagogical priorities away from teaching analytical problem-solving skills to cultivating a 'paradigm-shifting' mentality. We have shown how creators need to excel in the art of crafting relationship between sets of apparently disparate ideas and thus bring alive the facts they are attempting to impart. Only when such facts are embellished and illuminated by a mind possessing an intimate sense for the power and beauty of ideas and the bearing of one set of ideas on another, can they become pregnant with meaning and therefore able to excite the entrepreneurial imagination.

This study sharesrst reflections on the engagement by scholars and artists, across a number of creative arts disciplines, in the advancement of entrepreneurship research and education. It has begun to pose such questions as: What knowledge about enterprising can such an engagement with creative arts reveal that may not be revealed by other modes of
inquiry and teaching? And what implications does engagement with the arts have for extending our understandings of the role of practice-based inquiry and pedagogy and multiple intelligences in the production of knowledge? And how can the outcomes and broader applications of artistic research and pedagogy enhance understandings of artistic practice as research and pedagogy? Based on the literature search, on dozens of exploratory interactions with entrepreneurs, and on our first educational experiments, we purport that to invite literature and the arts into entrepreneurship research and education can provide new openings for the exploration of the self, of relationships, of framing and of entrepreneurial becoming.

We also suggest that what Chia calls “the micro-logics of perceptual organization, necessary for cultivating a critical sensitivity to hidden assumptions and subtle relationships in social situations” will be furthered and that these enhanced capabilities will further entrepreneurial becoming and entrepreneurial achievement. This study sets the scene for an experimental research to consider and share relationships between the arts and the entrepreneurial process, away from classical equilibrium-based understandings, toward creative process views inspired from a broad range of relevant and seemingly irrelevant perspectives. This is work in progress we hope for all kinds of stimulating echoes, and we shall be back.

References


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1 (Bechard & Gregoire, 2005; Fendt, Paris, & Bureau, 2008; Kuratko, 2005). These exercises comes along with more or less contextual embeddedness, e.g. interaction between students and the “real world” (Brindley & Ritchie, 2000). But does this method work? Some benefits are evidenced (Pittaway & Cope, 2007a, (Arlotto, Boissin, & Maurin, 2007; Fukugawa, 2005; Ridder & Van der Sijde, 2003, Carson, 1985; Chan & Anderson, 1994; Daly, 2001; Katz, Gundry, Low, & Starr, 1996; Wani, Garg, & Sharma, 2004), but it is unclear whether such normative programs shape graduates to become more effective entrepreneurs – and what type of entrepreneurs.
The Impact of an Entrepreneur or Small Business Owner’s Education on Knowledge Acquisition

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ABSTRACT

Entrepreneurs and small business owners come from a wide variety of educational backgrounds. This study will investigate the relationship between the educational background of small business owners and entrepreneurs and the training methods they utilize with their workforce. We hypothesize that the educational level of owners and small business owners will correlate with training methods they use on their employees. This study examines survey data collected from 135 entrepreneurs and small business owners in the Washington, DC area. The results indicate that while employer age rather than training level may be more influential in their choices of employee training methods.

Introduction

Entrepreneurs and small business owners come from a wide variety of educational backgrounds. While some graduate from college or graduate schools and use their training and education to run their business, others drop out from high school and rely solely upon their innate knowledge and instincts. Likewise, the educational backgrounds of the employees of owners vary widely, a fact that places a unique set of challenges and requirements upon an owner’s approach toward employee training.

This study will investigate the relationship between the educational background of small business owners and entrepreneurs and the training methods they utilize with their workforce. We hypothesize that the educational level of owners and small business owners will correlate with training methods they use on their employees. For example, managers without formal
education will be less likely to use methods and tools that mimic formal education. In addition, managers with strong academic backgrounds may expose their employees to training methods directed towards long-term benefits because their educational backgrounds stress more strategic and long-term views.

For this study, we seek to look at two topics related to knowledge acquisition in a small business, whether by an entrepreneur or small business owner. They are:

1. Does an owner’s educational background affect the methods and tools chosen for training the owner and the management team?

2. Does an owner’s educational background affect the owner’s perceived need for training throughout the business?

The following section will set forth theoretical support underlying the hypotheses posed above. Thereafter, an explanation of the nature of the data collection and analysis methods will be provided. Finally, the results of the study will be discussed along with their attendant implications and avenues for future research.

Theoretical Background

Small businesses and their human resource management (HRM) practices are drawing increased attention in the literature (Harney & Dundon, 2006). In particular, the importance of developing the employees who drive the entrepreneurial venture toward success is vital to the continued operation and growth of the business. However, despite the size of the market for training (estimated at billions of dollars each year), there is comparably little research focusing on it, much less the factors that contribute to the decision to seek training for employees (Banks, Bures, & Champion, 1987).
Employee development, and especially manager training, has grown to be a popular topic among business periodicals, which now discuss the benefits and costs of training, and advertisements in such media often include classes and seminars on a variety of management topics. Not surprisingly, the lack of skilled human resources along with employee training and development has been attributed to why American companies are losing market share in the global marketplace (Lichtenstein, 1992; Senge, 1994; Cross & Funk, 1997; Yochelson, 2000; Carnevale, 2005). In fact, a National Federation of Independent Business Small Business Poll entitled *The Changing Search for Employees* indicates that 71 percent of small employers feel that qualified employees are hard to find (Dennis, 2001), meaning employers must actively seek training for their employees, just to have them function at their jobs. In addition, a 2004 Administaff survey of small and medium firms found that, although respondents were somewhat optimistic about the future, they were still concerned about providing adequate training and motivation for employees (Administaff, 2005). Adding to this grim portrait of employee training, the Bureau of Labor Statistics projects that during the next decade, 30 percent of new jobs will require some postsecondary education or vocational training (Carnevale, 2005).

Assuming current projections and research findings hold true, owners and managers of small and medium enterprises will have to rely on less qualified employees, who will require a greater degree of training and development in order to be productive (Carnevale, 2005). As a result, managers will have to develop the mindset that their employees are a significant investment, constituting their firm’s human capital, and therefore apply the same effort to keep employees well maintained. Viewed in this light, training and development of employees must be seen as imperative to firm survival.
To Train or Not to Train

Employers provide their employees with training and development for numerous reasons. Initially, employers may wish to orient new hires to the organization or teach them how to perform in their positions. Many organizations later wish to improve the performance of some employees or prepare other employees for pending promotions or revisions to their current positions in terms of design, processes, or technology (Fisher, Schoenfeldt, & Shaw, 1999). Many small firms follow the mantra that it is cheaper to retain and retrain workers than fire and rehire (Wells, 2001). This philosophy points to the fact that including training as part of a company’s HRM program can actually help motivate—and thereby increase the retention of—employees, providing new experiences even to veteran employees (Deshpande, Golhar, & Stamm, 1993, Hornsby & Kuratko, 1990).

More direct evidence of the benefits of training employees comes from a recent study conducted by the American Society for Training & Development (Pangarkar, 2002/2003). The study demonstrated that there is evidence of a direct relationship between how much a firm spends on employee training and the percentage of increase in organizational performance. Other studies that included training as a component of an HRM program found similar results (Hayton, 2003; Way, 2002). Thus, evidence shows that organizations may be rewarded financially for investing in their employees through increased profits and low employee turnover. Thus, it is not surprising that seventy percent of all employers provide some type of formal training for employees (Noe, 1998). In one research study, 75 percent of respondents in firms with fewer than 500 employees received some training (Schaaf, 1998).

Despite all of the evidence in support of training, though, many small business owners do not train their employees. Tracey (2001) identifies reasons why this may be so, including: (1) not
knowing how to give employees the training they need; (2) not knowing what materials are relevant to necessitate proper training; (3) not knowing how to measure the effectiveness of training; and (4) not knowing how to encourage employees to use the new skills learned or evaluating whether learning has actually occurred. Harney and Dundon (2006) and Wright and Boswell (2002) noted that even among “good” employers, practices can differ greatly, even from what best practice models would suggest. Much research tends to assume that small businesses are purely rational entities (Scott, 2003) that capture only a part of how HR systems work (Ferris, Arthur, Berkson, Kaplan, Cook-Harrell, & Frink, 1998).

In the end, though, the benefits of training are clear. As described earlier, small and medium enterprises can raise organizational productivity by training and developing their employees. By conducting training, these firms can ensure that the right people learn the right things at the right time and in the right priority order (O’Connor, Bronner, & Delaney, 1996).

However, one of the key questions left unexplored is what drives owners’ decisions about training. Williamson and Cable (2003), in fact, encourage researchers to consider social environmental factors in HRM theories. Our study seeks to look at one such factor—the owner’s educational background as a factor affecting training preferences.

**Methodology**

**Sample and Data**

The data for this paper comes from a small business training and internet questionnaire conducted by the Center for Entrepreneurial Excellence (CFEE) at The George Washington University School of Business. CFEE sent the survey to three hundred entrepreneurs and small business owners in the DC area. 135 surveys were completed and returned to the Center. The
survey covered a variety of topics, including demographic and background information about the entrepreneur or small business owner, the types of training methods and tools used, and the areas of training sought for self-development and development of the management team. Each of the survey questions allowed entrepreneurs and small business owners to identify which training topics and methods/tools are most relevant to their businesses. These aspects were aggregated into larger constructs, allowing us create scales, built around common themes. Training topics were gathered into three categories: Finance-focused (accounting and recordkeeping, how to obtain capital, and financial analysis and cost control) (range 0 to 12, mean 5.41, standard deviation 1.5333, Cronbach’s α 0.735), Sales-focused (researching your market, increasing sales, promotional strategy, international trade) (range 0 to 12, mean 7.05, standard deviation 1.627, Cronbach’s α 0.591), and Business Operations-focused (inventory management, engineering R&D, personnel, and computer systems) (range 0 to 16, mean 6.86, standard deviation 2.176, Cronbach’s α 0.764). For all three categories, lower values indicate a greater demand for that type of training.

The training methods and tools were grouped into lecture-based (range 0 to 28, mean 12.66, standard deviation 3.917, Cronbach’s α 0.871) and hands-on-based (range 0 to 36, mean 16.39, standard deviation 4.252, Cronbach’s α 0.863). Both scales are scored such that lower values indicate a greater preference for a certain style of training. Note that inclusion in one group or the other does not preclude a training method or tool from including both lecture and hands-on elements. Instead, it indicates the primary method for conveying information. For lecture-based training, the information usually comes from a recognized expert in the field who provides information while the trainee passively accepts the information. In hands-on-based training, information may be conveyed initially, but the student then applies that information to
the job or a simulation, providing directed practice. We regressed the educational attainments of the entrepreneurs and small business owners, along with appropriate control variables, against these scales.

The survey directly asked for the respondent’s maximum educational level obtained. The responses received fell into one of three categories: high school education, undergraduate education, and vocational school. We also had a population who did not respond to the question. The vocational school category had only six respondents, and so they were merged with the non-response category. We detected no biases in the data from those who failed to respond to the question, and so we included them as a third category of “mixed educational background.” We suspect that their lack of response may have been due to an unwillingness to share low educational achievement; however, our survey did not have any questions that could validate this theory.

**Control Variables**

For this study, we sought to use three control variables. The first is the gender of the small business owner. Interestingly, although the survey was sent to a mixed population of male and female owners, the usable responses were all male. As such, gender was left out of the regressions. The second control variable included was the age of the owner, included in the questionnaire in six age ranges: 18-25, 26-35, 36-45, 46-55, 56-65, and 66 and over. As shown in previous studies (Solomon & Tomczyk, 2007), age has a significant effect on the types of training sought, and so we include it in our regressions. Finally, we also include the age of the firm (expressed as an integer, mean 2.86, standard deviation 23.851) to control for the effect of organizational inertia. Older businesses may be more inclined to pursue more traditional training
topics and methods, and so we include this variable to control for any such effect. Finally, we included the number of full-time and part-time employees in the firm in order to control for any preference effects caused by having more employees. Presumably, owners of larger firms would prefer training that could reach more employees, meaning an increased preference for lecture-based training, rather than hands-on-based, an effect that has been studied before (Deshpande & Golhar, 1994), although not specifically in the context of training. In addition, larger firms are more likely to be concerned with business operations-focused training as they can have people who specialize in helping the firm to maintain or grow in size. Industry of the firms was collected and considered for inclusion, but the number of firms in each category was too low to yield any significant response.

Results

In the regressions below, the mixed educational background group was the baseline category.
Table 1: The Effect of Owner’s Education on the Type of Training Sought

<table>
<thead>
<tr>
<th>Variable</th>
<th>Finance-Focused</th>
<th>Sales-Focused</th>
<th>Business Operations-Focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>8.126</td>
<td>8.124</td>
<td>9.498</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Age of Owner</td>
<td>-0.432</td>
<td>-0.465</td>
<td>-0.634</td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.003)</td>
<td>(0.007)</td>
</tr>
<tr>
<td>High School</td>
<td>-0.183</td>
<td>0.156</td>
<td>-0.827</td>
</tr>
<tr>
<td>Diploma/GED</td>
<td>(0.855)</td>
<td>(0.825)</td>
<td>(0.448)</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>-0.730</td>
<td>0.159</td>
<td>-0.635</td>
</tr>
<tr>
<td>Degree</td>
<td>(0.364)</td>
<td>(0.777)</td>
<td>(0.464)</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>-0.021</td>
<td>0.000</td>
<td>-0.014</td>
</tr>
<tr>
<td></td>
<td>(0.203)</td>
<td>(0.998)</td>
<td>(0.438)</td>
</tr>
<tr>
<td>Full-Time</td>
<td>0.005</td>
<td>0.009</td>
<td>0.000</td>
</tr>
<tr>
<td>Employees</td>
<td>(0.802)</td>
<td>(0.476)</td>
<td>(0.966)</td>
</tr>
<tr>
<td>Part-Time</td>
<td>-0.340</td>
<td>-0.129</td>
<td>-0.091</td>
</tr>
<tr>
<td>Employees</td>
<td>(0.014)</td>
<td>(0.169)</td>
<td>(0.521)</td>
</tr>
<tr>
<td>R2</td>
<td>0.448</td>
<td>0.376</td>
<td>0.357</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.315</td>
<td>0.227</td>
<td>0.202</td>
</tr>
</tbody>
</table>

In all three instances, the educational attainment of the owner was not significant. Thus, Hypothesis 1 is unconfirmed. However, the results of the three regressions show that older owners value all types of training more than other owners. In addition, for finance-focused training the number of part-time employees is significant.
Table 2: The Effect of Owner’s Education on the Methods & Tools for Training Sought

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lecture-Based</th>
<th>Hands-On-Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>15.924</td>
<td>20.479</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Age of Owner</td>
<td>-1.819</td>
<td>-1.291</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.018)</td>
</tr>
<tr>
<td>High School</td>
<td>0.372</td>
<td>-1.305</td>
</tr>
<tr>
<td>Diploma/GED</td>
<td>(0.880)</td>
<td>(0.613)</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>-1.150</td>
<td>-0.462</td>
</tr>
<tr>
<td>Degree</td>
<td>(0.560)</td>
<td>(0.821)</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>-0.024</td>
<td>-0.028</td>
</tr>
<tr>
<td></td>
<td>(0.546)</td>
<td>(0.497)</td>
</tr>
<tr>
<td>Full-Time</td>
<td>-0.061</td>
<td>-0.022</td>
</tr>
<tr>
<td>Employees</td>
<td>(0.175)</td>
<td>(0.636)</td>
</tr>
<tr>
<td>Part-Time</td>
<td>-0.190</td>
<td>-0.110</td>
</tr>
<tr>
<td>Employees</td>
<td>(0.556)</td>
<td>(0.742)</td>
</tr>
<tr>
<td>R²</td>
<td>0.437</td>
<td>0.275</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.302</td>
<td>0.100</td>
</tr>
</tbody>
</table>

Based on the results of these two regressions looking at the effect of owners’ educational attainment on the preferred methods and tools used for training, Hypothesis 2 is unconfirmed. Neither the high school group nor the undergraduate group showed any significant difference from their peers. However, the age of the owners was significant in both regressions, showing that older owners are more favorably inclined toward both training methodology.

**Discussion and Limitations**

The results of the analysis show that our two hypotheses are unsupported. This indicates that a small business owner’s educational background is unconnected to the importance placed on training, meaning that all owners realize the need for training for their employees, and they seek the most effective method for such training. However, this explanation must be considered
along with one significant caveat; we were unable to gather sufficient responses from several of the other educational background categories to be able to generalize this finding across all backgrounds. Future studies should actively seek these other groups to determine whether the preferences are consistent universally.

We also found that older owners were more interested each type of training and training methodology than their younger counterparts. This may be due to the fact that the importance of training is an appreciation acquired over time. Veteran owners may realize that it is better to hire employees with strong work ethics and an ability to learn, than to hire someone with knowledge that may well become dated within a few years. The data show that with each decade older an owner is, the desire for training and the flexibility toward how that training is conveyed is increased. However, future studies should consider adding additional granularity to this component, allowing more thorough examination than using age brackets can allow.

Another finding was that the size of the firm, specifically the number of part-time employees, increased the desire for financial-focused training by small business owners. The result may indicate that firms that rely heavily on part-time employees often must hire people who lack financial skills and acumen. There are two primary explanations for this. The first is that the skills necessary to handle financial responsibilities require extensive time investment by the employee, and people who have invest the requisite time prefer full-time employment. The second possibility is that the people owners hire for part-time employment are not financially skilled, and recognizing this fact, owners seek to correct this deficit of knowledge.
Conclusion

This study has offered several academic and practical contributions. First, the study has shed light on the small business owner’s motivation in choosing certain training methods and topics over others. In addition, this study revealed an unexpected key characteristic that determines an owner’s capacity for recognizing and addressing employee training needs: their age. Second, with the establishment of empirical correlation between age of the owner and training preferences and the lack of a connection between educational background and training preferences, conceptual explanatory models may be developed to explain the relationship, or lack thereof, between these components. Finally, this study lays the foundation for future studies that may assess the effect of the synergy between owner demographics and training methods upon various performance measures.

From a practical standpoint, the results of this study may help inform the marketing decisions of training firms. Understanding how the demographics of the owner affect training preferences may help firms better tailor their marketing to match those owners most likely to make purchases. Such training facilities include academic institutions that already have or are developing workshops, seminars, and other educational opportunities as part of their outreach to their communities.

References


Small Business Training & Internet Questionnaire, conducted by George Washington University through the Center for Entrepreneurial Excellence (CFEE).


Experiential learning is significantly impacting many aspects of instructional pedagogy. It’s relevance and applicability often come into question – not so in these areas: student field case consulting and business plan competitions. In the former, the Small Business Institute (S.B.I.), a national organization, has mastered the art and skill of pedagogical delivery. We discuss, along with some student teams, the benefits of connecting students and businesses through the S.B.I. model. Skills are refined and reinforced, while business owners have real solutions to erstwhile problems. A parallel application of skills occurs when student teams develop winning business plans. These are explored as to benefits for learning and future careers for aspiring entrepreneurs. Again, the how’s and why’s are reinforced through student teams. In both opportunities for learning and growth, the true values of the educational experience are revealed.

Keywords: student consulting, business plans, experiential learning
This research explored the relationship between leader cognitive models of strategic thinking and firm performance. It provides an empirical examination of the link between influential streams of strategic management thinking perceived as the top manager decision-making strategies, and organizational success. The hypotheses tested were generated from a classification model yielding four cognitive models of strategic management thought. Regression analysis was used to examine the relationship between cognitive models of strategic thinking and firm performance. The respondents were 127 (31 percent of the population) top managers from the population of Croatian firms. ROE and ROA, available from secondary sources, were used to assess financial performance.

Key words: cognitive models, strategy, strategic thinking

Introduction

In one of the earliest definitions of strategic management Steiner (1969) defined it as the -- scientific discipline that helps top managers scan the environment, define the mission and the vision, strategy formulation, its implementation, control and evaluation. Consistent with the Steiner’s focus on top managers as strategic decision makers, in the McKinsey Survey - Improving Strategic Planning (McKinsey Survey 2006), 62 percent of the respondents reported that the majority of strategic decisions in the firm are made by a small proportion of senior managers, i.e., the CEO or equivalent. Those in charge of the process of strategic management provide direction to the firm not just by making strategic decisions, but more deeply, by sharing and embedding a perception of “effective” strategic management on the whole firm.

This paper is consistent with an invitation from researchers (Hiller, Hambrick 2005, Delgado-Garcia, De La Fuente- Sabate 2010) to incorporate new psychological constructs into the upper echelons perspective. The leader's “cognitive model of strategic thinking” can be characterized as resulting from the set of influences, formal and informal learning, and field tested experiences that mold executive leaders over the course of a career. Each top
manager has his/her own specific cognitive model of strategic thinking. With the advent of modern strategic theory and the learning systems that translate theory into practice, it is reasonable to assume that a majority of top leaders demonstrate a preference for a particular strategic thinking model – a thinking model that will to a greater or lesser extent reflect existing theory. This in turn allows for the identification of discernable cognitive models of strategic thinking.

In the first section of this paper we present the short review of the Croatian management research. The second section develops and showcases the theoretical drivers of the research. Section three presents two hypotheses and their underlying logic. Section four reports the research design and analytical methodology. Section five reports the empirical results. Section six discusses the results, while section seven calls attention to the limitations of the study and propositions for further research.

**The Croatian Top Management Research**

Strategy research conducted on Croatian firms is limited to several studies conducted over the past decade. The first study (Alfirević 2000) demonstrated the lingering influence of state driven organizational designs. The research showed that despite that the need for fundamental changes in competitive environment top managers of Croatian firms did not perceive that change was required. Top managers reported of being satisfied with the organizational design of their own firm. In a second study (Buble et.al. 2003), using data based on the international research conducted in 2001, identified successful strategic behaviors of Croatian and Slovenian firms on a comparative basis. Apart from the theoretically accepted strategic models of behavior, the results evidenced the significant relation between the firms’ financial performance and organizational culture. When the researchers compared variances in strategic behavior between the Croatian and Slovenian
strategic business units a number of apparent differences appeared. (Note: because only a small number of Croatian firms was available at the time of the study, the differences are not statistically significant). Nonetheless the investigators were able to report that:

• Croatian business units do not implement investing strategies as frequently as do the Slovenian ones;
• A larger share of the Croatian business units had no explicitly defined and implemented generic business strategy;
• A smaller share of Croatian units applied collaborative strategies.

These limited studies offered only a general idea of the qualitative characteristics of the Croatian management. This paper is intended to investigate compliment and extend the earlier studies of contemporary Croatia.

**Theory Development**

The richness of theories and directions in strategic management over the past four decades makes the overview on the progress of the discipline difficult. Most scholars agree that the most influential theories of strategic management were mainly developed in the USA (Kesner 2005).

The accumulated practice and research on specific topics in strategic management has yielded a rich set of distinctive and diverse typologies/models of strategic thinking (Mintzberg 1973; Grandori 1984; Chaffee 1985; Ansoff 1987; Hart 1992; Idenburg 1993; Hampden- Turner 1993; Whittington 1993; Mintzberg 1994; McKiernan 1996; Mintzberg, Ahlstrand, and Lampel 1998; Haberberg, Rieple 2001; Jelenc 2004). They all present a theoretically based approach toward the process of formulating, implementing and controlling firm strategies. Figure 1 provides a summary of a number of writers on the topic. When looking closely at the review of the models of strategic thinking it is possible to detect
three large groups of different authors' approaches to the subject. The first group is the measurement approach which seeks to scale strategic behaviors within a prescribed categorical framework. It is not important the group in which top managers has been put, but rather a point on the continuum about his preferences (for example Bourgeois and Brodwin (1984) listed commander, change, collaborative, cultural and creative as the classification sorted by the increasing level of engaging employees in the process of strategic management). The second group is the categorial approach, in which one, two or three criteria are important to make two/three/four relations available for top managers (for example Whittington lists classical, evolutionary, processual and systemic approach according to the outcomes of strategy and the processes by which is it made). The third group are the classifications with non-categorial approach, rather different point of views that researched regarded as crucial and important to label. In this group there is no specific pattern or criterion rather a rule of thumb that guided researchers in their suggestions (for example McKiernan listed planning, practice, learning, positioning and resource-based view according to distinctive and clear way of identifying strategy past and future).
Taken together this wide ranging, yet interwoven, set of efforts to capture the essence of strategic management can be characterized as a paradigm according to Kuhn (1996). A paradigm is defined as the constellation of beliefs, values and techniques shared by the members of a given community (Kuhn 1996). In other words, the paradigm identified here represents the set of values, attitudes and perspectives shared by a group of theoreticians and top managers. The category comprising any single model very slightly in number and nature depending on the perspective of researcher but they are all drawn from a common set of core aspirations and assumptions.
Jelenc (2004) and Jelenc, Vrdoljak- Raguž (2010) analyzed and coded these different models and empirically derived a meta-typology postulating four Cognitive Models of Strategic Thinking – Classical, Environmental, Competitive and Contemporary.

The **Classical model** presents what have come to be thought of as the basics of strategic management. It has the deepest historical roots and is strongly identified with US authors in the post WWII period of corporate economic expansion. Within the classical model of strategic management there are two major streams of thought - the conceptual and the planning approaches. The underlying idea of the conceptual stream is the call to establish a fit between the outer and inner environment. Christensen et.al. (1985) and Andrews (1971, 1987) specify the process of strategy formulation as a deliberate and conscious act of analysis for fit. The planning approach of strategic management is characterized as a more formal procedure, formal training, and the formal analysis with a bunch of numbers (Mintzberg, Ahlstrand, Lampel, 1998). According to this approach, the focus is on the objective analyses within and outside the firm, which help create arguments as features of the planning procedure. *To predict and to prepare* (Ackoff, 1983 cited in Mintzberg, Ahlstrand and Lampel 1998) is the motto in planning the future. Figure 2 identifies the leading contributors to the classical cognitive model of strategic management.
Figure 2 Contributions to the Classical cognitive model

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Main publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christensen, Berg, Salter, Stevenson</td>
<td>1951</td>
<td><em>Policy Formulation and Administration</em></td>
</tr>
<tr>
<td>Barnard</td>
<td>1956</td>
<td><em>The Functions of the Executive</em></td>
</tr>
<tr>
<td>Selznick</td>
<td>1957</td>
<td><em>Leadership in Administration</em></td>
</tr>
<tr>
<td>Moore</td>
<td>1959</td>
<td><em>Managerial Strategies</em></td>
</tr>
<tr>
<td>Chandler</td>
<td>1962</td>
<td><em>Strategy and Structure</em></td>
</tr>
<tr>
<td>Bilmour and Brandenburg</td>
<td>1962</td>
<td><em>Anatomy of Corporate Planning</em></td>
</tr>
<tr>
<td>Barnard</td>
<td>1962</td>
<td><em>Organization and Management</em></td>
</tr>
<tr>
<td>Tilles</td>
<td>1963</td>
<td><em>How to Evaluate Corporate Strategy</em></td>
</tr>
<tr>
<td>Ansoff</td>
<td>1965</td>
<td><em>Corporate Strategy</em></td>
</tr>
<tr>
<td>Learned, Christensen, Andrews, Guth</td>
<td>1965/1966</td>
<td><em>Business Policy: Text and Cases</em></td>
</tr>
<tr>
<td>Steiner</td>
<td>1969</td>
<td><em>Top Management Planning</em></td>
</tr>
<tr>
<td>Ackoff</td>
<td>1970</td>
<td><em>A Concept of Corporate Planning</em></td>
</tr>
<tr>
<td>Newman, Logan</td>
<td>1971</td>
<td><em>Strategy, Policy and Central Management</em></td>
</tr>
<tr>
<td>Andrews</td>
<td>1971</td>
<td><em>The Concept of Corporate Strategy</em></td>
</tr>
<tr>
<td>Chandler</td>
<td>1977</td>
<td><em>The Visible Hand</em></td>
</tr>
<tr>
<td>Steiner</td>
<td>1979</td>
<td><em>Strategic Planning, What Every Manager must Know</em></td>
</tr>
</tbody>
</table>

The **Environmental** cognitive model of strategic management is distinguished by its focus on the reactive and passive ways of transitioning from the past to the future. Drawing heavily on biological science based insights about natural selection, according to this view in the world, strategy is about how the firm adapts and changes according to the imperatives of the forces from the environment. Adding to insights gathered from biological theory, this approach taps into anthropology for insights into the role of culture and into political science theory to discuss the importance of power. A core assumption of the environmental model is that the behavior of the individual within the firm can be explained with the individual’s embeddedness in a social system, more accurately, to a set of social relations with the family, state, professional and educational background, religion and nationality, sex and social class. This sociologically dependent behavior reflects a modus operandi defining what is acceptable, desirable and what is not, i.e. what is shameful and punishable. Because societies are too complicated and people are too individual to expect uniformity of behavior, according
to the Enviromental cognitive model every strategist should analyze his social characteristics, characteristics of his colleagues, partners, and competitors to acquire an image of social discourse diversities and rules of acceptable behaviors (Whittington 1993). Figure 3 presents the contribution of key researchers within environmental school.

**Figure 3 Contributions for the Environmental cognitive model**

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Main publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawley</td>
<td>1950</td>
<td><em>Human ecology</em></td>
</tr>
<tr>
<td>Bruns, Stalker</td>
<td>1961</td>
<td><em>The management of innovation</em></td>
</tr>
<tr>
<td>Lindblom, Braybrook</td>
<td>1963</td>
<td><em>A Strategy of Decision</em></td>
</tr>
<tr>
<td>Woodward</td>
<td>1965</td>
<td><em>Industrial organization: Theory and practice</em></td>
</tr>
<tr>
<td>Lawrence, Lorsch</td>
<td>1967</td>
<td><em>Differentiation and Integration in Complex Organizations</em></td>
</tr>
<tr>
<td>Hannan, Freeman</td>
<td>1977</td>
<td><em>The Population Ecology of Organization</em></td>
</tr>
<tr>
<td>Schendel, Hofer</td>
<td>1979</td>
<td><em>Strategic Management: A New View of Business Policy and Planning</em></td>
</tr>
<tr>
<td>Freeman</td>
<td>1984</td>
<td><em>Strategic management: a stakeholder approach</em></td>
</tr>
</tbody>
</table>

The **Competitive** model of strategic management is distinguished by its call for an active attitude towards the future, emphasizing the importance of competitive advantage. The model emphasizes the development, nourishment, and sustainability of the competitive advantages as representing the main reason for a firm’s success. The positioning and analytical schools of strategic management develop the models of competitiveness on several levels: industry level (Porter 1979, 1980, 1991), firm level seen through the entrepreneurial school (Schumpeter 1934, 1947) or individual level seen through the visionary school (Drucker 1970; Mintzberg 1973). The resource-based strategy (Grant 1991; Barney 1991; Teece 1990; Penrose 1959; Prahalad and Hamel 1990) describes strategy formulation according to the resources and capabilities that must be considered as strategic and at the same time dynamic and sustainable in order to accomplish a long-run success. Figure 4 lists the contribution of the Competitive model.
The Contemporary cognitive model of strategic thinking is the fourth and newest perspective on the study of strategy. This school does not challenge classical school per se, but rather its focus in on a change in underlying logic of strategy with a focus on the importance of collaboration and cognition. The model emphasizes the need for mutual understanding. It's adherents believe that competitive tensions reduce the business rationale of all competitors, thus making them weaker (Chaharbaghib and Willis 1998). It is more important to learn and gain knowledge and notions on how to be different and how to collaborate in order to achieve goals and success. The cognitive school (Wick 1987; Smircich and Stubbart 1985) tries to explain the way in which strategy is formulated in the head of the strategists. The learning school (Cyert and March 1963; Normann 1977; Argyris and Schön 1978; Senge 1990) thinks that the process of strategic management is complex, however, they believe it can be successfully created and managed by continuous learning about the process and about the ways of improving it. Figure 5 showcases important contributors to this model.
Proposed theoretical cognitive models of strategic thinking have been developed in the form of hypothesis and empirically tested on the sample of Croatian top managers.

**Hypothesis**

The aim of this paper, as showcased in Figure 6, is twofold. The first objective is to test for the existence of the four proposed cognitive models of strategic management. The second objective is to investigate the impact of top manager cognitive pre-dispositions and firm financial performance.
As argued above the strategic behavior of a given firm is strongly influenced by the underlying cognitive map of its most influential leader. These personal cognitive maps are reflections of values, beliefs and assumptions about the correct way to organize and address competitive challenges. The top managers’ personal paradigm and subsequent strategic behavior can be grouped and simplified into several constructs that represent distinctive top manager orientations (classical, environmental, competitive, and contemporary models). Setting the number of cognitive models of strategic thinking to four can be limiting, but at the same time it offers a balance between the reality of complex business environments and the mainstream paradigms of strategic business thinking.

**Hypothesis 1:** *The way of perceiving the process of strategic management is represented by four cognitive models of strategic thinking.*

Strategic management is a process whose ultimate aim is to achieve a firm performance goal. This goal could be expressed in financial terms (e.g. percentage of profit increase within five years…) or in the non-financial term (e.g. entering new foreign markets, launching new products, merging with other firms). No matter how the goals have been
expressed, the results are expressed in financial measures. Measuring performance is relevant to managers because it helps them make decisions about resource allocation. The strategic fit is a core concept in normative models of strategy formulation. The pursuit of the strategic fit has traditionally been viewed as a desirable performance implication. The way top manager perceives the process of strategic management and forms his cognitive model of strategic thinking is related to the results of his actions - financial results of the firm. His strategic behavior is directly influencing strategic actions, strategy implementation and final results.

Hypothesis 2: Firm performance will be impacted by the leader’s preferred cognitive model. Differences in firm performance will be observed across the four cognitive strategic management schools - Classical, Environmental, Competitive, and Contemporary.

We chose the questionnaire as the instrument for empirical research the top managers’ perceptions of the process of strategic management, more precisely, cognitive models of strategic management thought. Given the research environment it was determined that a printed questionnaire was the most appropriate for data collection. The questionnaire was initially tested with a pilot study. In this phase, semi-structured interviews were conducted with three top managers and consulting two academics. The semi-structured interview with the three top managers offered insights the structure and wording of questions. They read the statements and suggested reformulating some questions, deleting and adding questions in order to elaborate on some issues making them more understandable. Their suggestions added to the straightforwardness of statements and a better understanding of instructions. The academic consultants offered suggestions regarding methodological improvements to better relate questionnaire statements to the research hypothesis and called attention to potential logical errors. After revising the questionnaire according to the suggested improvements, it
was distributed to the population of Croatian firms employing at least 250 employees (401 firms in total).

We used the official database of the Croatian Chamber of Economy (www.hgk.hr) to select the firms according to the criteria of the number of employees. On August 18, 2005, the database listed 401 firms that had 250 and more employees. Data collection took place from October 2006 until June 2007. During that period, we sent the questionnaire by post twice. All respondents received a letter of support issued by the Croatian Chamber of Commerce and web portal q21.net. A number of top managers were personally contacted via telephone, fax, e-mail and/or in person. Data collected continued until the end of June 2007, at that point 127 managers had responded, 31.82 % of the total population.

Hair et.al. (2005) suggests that, as a rule, a study should include at least five times as many observations as there are variables, but the more acceptable size would be a ten-to-one-ratio. In case of this paper, there are nine times more observations than there are variables (ten variables of strategic thinking and four schools of strategic management in comparison to 127 observations).

The empirical research showed that the average respondent and the average firm have the following profiles:

- Top manager answered the questionnaire (60.6 percent),
- Top manager is between 46 and 60 years of age (56.7 percent),
- Top manager holds a university degree (66.1 percent),
- Top manager has been on the current position between two and five years (41.7 percent),
- Prior to the current position, he/she worked inside the firm (53.5 percent),
- Firm employs between 250 and 500 employees (55.9 percent),
- It is a privately owned firm (56.7 percent),
- Firm produces a product rather than offering a service (55.9 percent),
• Firm operates in the energy production and distribution industry (44.9 percent),
• Firm has been operating for more than 31 years (70.1 percent), and
• Firm works mainly on the domestic market (48 percent).

The sample is statistically representative of the population according to several criteria. T-tests showed no significant difference between respondents and non-respondents on the following criteria: form of ownership \( (t = 0.614, \text{ d.f. 399, } p> 0.10) \), legal form of firm \( (t = 1.137, \text{ d.f. 399, } p> 0.10) \), origin of capital \( (t = 0.770, \text{ d.f. 399, } p> 0.10) \), and Croatian National Classification of Industries \( (t = 0.483, \text{ d.f. 399, } p>0.10) \). There was, however, one criterion showing a statistically significant difference between respondent and non-respondents: the number of employees in the firm \( (t = 0.842, \text{ d.f. 399, } p<0.10) \). The data showed that the responding firms tend to employ slightly more employees than non-responding ones.

The geographical distribution of respondents according to county chambers in Croatia is presented in Figure 7. The percentage of population and the percentage of responses of Croatian firms within individual county chambers is shown to be more or less balanced.

_Figure 7 Distribution of population and responses according to individual county chambers_

<table>
<thead>
<tr>
<th>Code</th>
<th>County chamber</th>
<th>Population</th>
<th>Percent of Population</th>
<th>Responses</th>
<th>Percent of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001-1009</td>
<td>Karlovac</td>
<td>9</td>
<td>2.244</td>
<td>9</td>
<td>7.086</td>
</tr>
<tr>
<td>1010-1018</td>
<td>Bjelovar</td>
<td>9</td>
<td>2.244</td>
<td>3</td>
<td>2.362</td>
</tr>
<tr>
<td>1019-1025</td>
<td>Šibenik</td>
<td>7</td>
<td>1.745</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1026-1032</td>
<td>Zadar</td>
<td>7</td>
<td>1.745</td>
<td>3</td>
<td>2.362</td>
</tr>
<tr>
<td>1033-1041</td>
<td>Vukovar</td>
<td>9</td>
<td>2.244</td>
<td>2</td>
<td>1.574</td>
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<tr>
<td>1042-1048</td>
<td>Virovitica</td>
<td>7</td>
<td>1.745</td>
<td>1</td>
<td>0.787</td>
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<tr>
<td>1049-1067</td>
<td>Varaždin</td>
<td>19</td>
<td>4.740</td>
<td>4</td>
<td>3.150</td>
</tr>
<tr>
<td>1068-1094</td>
<td>Split</td>
<td>27</td>
<td>6.733</td>
<td>8</td>
<td>6.300</td>
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<tr>
<td>1095-1102</td>
<td>Slavonski Brod</td>
<td>8</td>
<td>1.995</td>
<td>2</td>
<td>1.574</td>
</tr>
<tr>
<td>1103-1109</td>
<td>Sisak</td>
<td>7</td>
<td>1.745</td>
<td>1</td>
<td>0.787</td>
</tr>
<tr>
<td>1110-1139</td>
<td>Rijeka</td>
<td>30</td>
<td>7.481</td>
<td>15</td>
<td>11.811</td>
</tr>
<tr>
<td>1140-1160</td>
<td>Pula</td>
<td>21</td>
<td>5.239</td>
<td>6</td>
<td>4.724</td>
</tr>
</tbody>
</table>
The research unit of the analysis was the top manager’s perception. In each of the firm there was only one top manager asked to answer the questionnaire. As indicated, prior researched has demonstrated that the top manager is the person most responsible for the process of strategic management in the firm. The top managers’ paradigm about the process of strategic management strongly influences the way the process of strategic management is formulated and the way it is going to be implemented, controlled, and evaluated. Top managers influence the perception of their direct subordinates and other employees in the firm, thus building the image of the firm in the market. The top managers’ perception is a part of their paradigm, according to which they shape their style of management and leadership and the way they comprehend the environment, the firm, and the future of their firm. The perception of the strategic management process does not interfere with the strategy content (e.g. the specific features of their industry or market characteristics), but rather the way it is approached.

This paper uses the term top manager, as the term representing the person who manages and leads at the strategic apex of the firm. It could be the case of a single person or a team. The job title for this function is has some variation - chief executive officer, managing director, top manager, general manager, senior manager – while actual job content is quite similar.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1161-1170</td>
<td>Požega</td>
<td>10</td>
<td>2.493</td>
</tr>
<tr>
<td>1171</td>
<td>Otočac</td>
<td>1</td>
<td>0.250</td>
</tr>
<tr>
<td>1172-1199</td>
<td>Osijek</td>
<td>28</td>
<td>6.982</td>
</tr>
<tr>
<td>1200-1208</td>
<td>Krapina</td>
<td>9</td>
<td>2.244</td>
</tr>
<tr>
<td>1209-1217</td>
<td>Koprivnica</td>
<td>9</td>
<td>2.244</td>
</tr>
<tr>
<td>1218-1226</td>
<td>Dubrovnik</td>
<td>9</td>
<td>2.244</td>
</tr>
<tr>
<td>1227-1244</td>
<td>Čakovec</td>
<td>18</td>
<td>4.490</td>
</tr>
<tr>
<td>1245-1401</td>
<td>Zagreb</td>
<td>157</td>
<td>39.153</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>401</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Empirical data

Independent Variable

The research unit of the analysis was the top manager’s perception. In each of the firm there was only one top manager asked to answer the questionnaire. As indicated, prior researched has demonstrated that the top manager is the person most responsible for the process of strategic management in the firm. The top managers’ paradigm about the process of strategic management strongly influences the way the process of strategic management is formulated and the way it is going to be implemented, controlled, and evaluated. Top managers influence the perception of their direct subordinates and other employees in the firm, thus building the image of the firm in the market. The top managers’ perception is a part of their paradigm, according to which they shape their style of management and leadership and the way they comprehend the environment, the firm, and the future of their firm. The perception of the strategic management process does not interfere with the strategy content (e.g. the specific features of their industry or market characteristics), but rather the way it is approached.

This paper uses the term top manager, as the term representing the person who manages and leads at the strategic apex of the firm. It could be the case of a single person or a team. The job title for this function is has some variation - chief executive officer, managing director, top manager, general manager, senior manager – while actual job content is quite similar.
Dependent Variable

Business performance – as indicated by financial viability - is the ultimate goal of firm's existence. In this paper we were able to secure quantitative measure of business performance - return on equity and return on assets. Because strategy involves the use of resources that give the company a competitive advantage (Barney 1991) and ROA yields the most direct information about how efficiently tangible resources have been allocated (Hull and Rothenberg 2008). ROA, therefore, is the most common accounting-based performance measure (Bergh and Ngah-Lim 2008) highly correlating with other measures such as return on sales (ROS) and return on equity (ROE). Both measures, ROE and ROA are highly dependent on the industry. They represent how effectively the company is converting cash, total assets (ROA) and equity (ROE) into net income. Many business experts recommend examining ROE and ROA over a longer period, not just for the previous year. This will take out any abnormal numbers out of the picture and will give a more realistic view. Over the long run, firms that are good at generating higher profits with the available assets are more viable and beneficial for business investments. In this research ROA and ROE are three year averages. The three-year average has the advantage of smoothing the data so as to better represent strategic performance and viability.

Results

The results of the research are classified by the hypothesis while the final conclusion summarizes all the results of the empirical research.

Hypothesis 1: The way of perceiving the process of strategic management is resented by four types of strategic management schools.

The validity for constructs of strategic cognitive models is tested by construct, symptomatic or theoretical validity in two ways (Psychometrics, 2001/2002). The subjective method of testing theoretical validity is performed by generating sentences/premises in order
to develop a questionnaire based on theoretical literature. In this research, once the questionnaire was created, two professors of strategic management read the statements and suggested content improvements. Each of the premises is founded on a specific paper and/or idea and supported by relevant literature. The objective method of testing validity was performed through factor analysis and by generating the most relevant premises of the schools of strategic management. We also conducted a face validity test (http://writing.colostate.edu/guides/research/relval/com2b2.cfm). In order to ensure that the questionnaire is well suited for practitioners in terms of statement clarity and straightforwardness of instructions, we consulted three top managers working in Croatian firms.

The constructs first of all tested for reliability using the Cronbach alpha test for internal consistency. Results for each of the proposed strategic thinking orientations are presented in the Figure 8. The generally accepted cut off level is 0.7. Using this as the reference score three of the four proposed orientation scales meet this threshold. The Cronbach alpha for the construct of classical school of strategic management was 0.776. Both competitive, (alpha = 0.840) and contemporary (alpha =0.841) school of strategic management had satisfactory levels of internal reliability. Only the environmental school orientation failed to meet the threshold with an alpha score of has 0.622<sup>1</sup>.

1 Cronbach alpha measures consistency among the individual items in a scale. It is not a statistical test; rather a coefficient or reliability and therefore the level of acceptance could be interpreted in a variety of ways (Cortina 1993; Cronbach 1951; Nunnally 1967; Peterson 1994; Voss et al. 2000). Cronbach alpha is recommended to be above 0.7, but not much higher than 0.9 (Nunnally 1994). The level of acceptance in the cognitive and psychometric testing is 0.75 or 0.80. Even between fields of psychology, the level of Cronbach alpha depends on the type of study. For example, cognitive tests (tests of intelligence or achievement) tend to be more reliable (above 0.8) than tests of attitude or personality (in cut-off point of 0.7 is more suitable). Other social sciences level is usually set at 0.7. The logic behind the level of 0.7 is the thinking that at that level the standard error of measurement will be over half (0.55) a standard deviation (Nunnally 1967; Thorndike and Hagen 1977). Some put the limit as low as 0.60 in case of the explanatory study (Kline 1999). The general attitude about strategic thinking was a challenge to measure and harder to create a construct. The acceptance level depends on the purpose of the test (explanatory or applied) or measure in question (Swailes and McIntyre- Bhatty 2002). As reported in Peterson (Peterson 1994), Nunnally changed his reliability recommendations from his 1967 edition of Psychometric Theory in his 1978 edition. In 1967, he recommended that a minimally acceptable
Figure 8 Internal reliability measured by Cronbach alpha before the factor analysis

<table>
<thead>
<tr>
<th>Cronbach alpha</th>
<th>All</th>
<th>Classical</th>
<th>Environmental</th>
<th>Competitive</th>
<th>Contemporary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.882</td>
<td>0.776</td>
<td>0.622</td>
<td>0.840</td>
<td>0.841</td>
</tr>
</tbody>
</table>

Source: Empirical data

The factor analysis performed on the items of schools of strategic management excluding items class 58, environ61, comp74, comp79, comp80, contem88 from further analysis. Pattern matrix in the Figure 9 demonstrates the loading of the factors and constructs.

Figure 9: Pattern matrix of the cognitive models of strategic management thought

<table>
<thead>
<tr>
<th>Items*</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contempor87</td>
<td>.798</td>
</tr>
<tr>
<td>Contempor89</td>
<td>.778</td>
</tr>
<tr>
<td>Contempor86</td>
<td>.718</td>
</tr>
<tr>
<td>Contempor91</td>
<td>.716</td>
</tr>
<tr>
<td>Comp82</td>
<td>.698</td>
</tr>
<tr>
<td>Comp77</td>
<td>.687</td>
</tr>
<tr>
<td>Comp72</td>
<td>.672</td>
</tr>
<tr>
<td>Comp78</td>
<td>.620</td>
</tr>
<tr>
<td>Contempor85</td>
<td>.602</td>
</tr>
<tr>
<td>Comp71</td>
<td>.549</td>
</tr>
<tr>
<td>Contempor90</td>
<td>.531</td>
</tr>
<tr>
<td>Contempor84</td>
<td>.527</td>
</tr>
<tr>
<td>Comp75</td>
<td>.517</td>
</tr>
<tr>
<td>Comp81</td>
<td>.495</td>
</tr>
<tr>
<td>Comp83</td>
<td>.478</td>
</tr>
<tr>
<td>Comp73</td>
<td>.478</td>
</tr>
</tbody>
</table>

reliability for preliminary research should be in the range of 0.5 to 0.6, whereas in 1978 he increased the recommended level to 0.7 (without explanation). The values beneath the level of 0.7 should not be disregarded automatically due to the several reasons. One reason for Cronbach alpha to be deflated is the fact that the construct measures several different ideas or different attributes/dimensions rather than one (Swailes and McIntyre-Bhatty 2002), and the correlations among items are weak or not present at all. Cronbach alpha measures how well their items measure a single one-dimensional latent construct. Therefore it is suggested to run a factor analysis and group the items within the same dimension and run the test of reliability once again (http://www.ats.ucla.edu/stat/spss/faq/alpha.html).

The second reason could be small number of items in the scale (Cortina 1993; Field 2005), especially below seven (McKennell 1978 cited in Swailes and McIntyre-Bhatty 2002). Research performed by several researchers (Churchill and Peter 1984; Bruner and Hensel 1993; Peterson 1994) proved the positive relationship between scale length (the number of items included in a scale) and the reliability of the scale. This was based on the idea that the wider are the scales, the greater are the variances, and therefore the alpha is increased. One interesting point is that scales with a central point (five or seven points) tend to generate higher alphas than those with four, like in this case) or six points (Voss et.al. 2000).
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Envir64</td>
<td>.703</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir68</td>
<td>.652</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir66</td>
<td>.499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir63</td>
<td>.494</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir65</td>
<td>.454</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir62</td>
<td>.436</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir69</td>
<td>.433</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir67</td>
<td>.408</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class49</td>
<td>.667</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class52</td>
<td>.623</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class56</td>
<td>.602</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir60</td>
<td>.570</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class50</td>
<td>.569</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class55</td>
<td>.539</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class54</td>
<td>.511</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envir70</td>
<td>.497</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class51</td>
<td>.474</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class53</td>
<td>.433</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class57</td>
<td>.432</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class59</td>
<td>.344</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach alpha</td>
<td>0.782</td>
<td>0.643</td>
<td>0.906</td>
<td></td>
</tr>
</tbody>
</table>


* For the statistical purpose, the premises are coded. The text of the items is listed in the appendix.

Source: Empirical data

The factor analysis and factor loading generated three cognitive models of strategic thinking. The names of each of the construct derived from the school that predominately forms the construct. Therefore, Hypothesis 1 is statistically strongly supported for two of proposed cognitive orientations and modestly supported for a third.
A one-way ANOVA between three constructs of strategic management schools and the variable (VAR01²) yields support for Hypothesis 2. Variable (VAR01) denotes the positive value or negative value of the selected financial results (ROE, ROA) for firms that prioritized selected strategic cognitive models. Competitive-contemporary cognitive model (N= 33) showed a significant relation ($F_{(1,125)} = 4.509, p<0.05$) positive relationship between orientations and financial results. Only the top managers leading and managing according to the premises of the competitive-contemporary school of strategic management have significantly better (positive) financial results than the top managers with cognitive orientations toward the other schools of strategic management. One might conclude that the majority of the top managers that picked the competitive-contemporary school of strategic management actually made a good choice because this choice is significantly related to the better (positive) financial results.

Figure 10 presents the financial results of each of the constructs of strategic management schools. The most frequently used construct is Competitive-Contemporary. The second is Classical school and the least used is Environmental school. The most successful orientation is among Croatian top managers is Competitive-Contemporary when the firm performance measure is ROA. In contrast the research indicates that the Environmental school is most effective if the performance criterion is ROE.

²Variable VAR01 was coded for either positive/negative values of profit.
Figure 10 Constructs of strategic cognitive models and financial results

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Financial measures</th>
<th>Classical</th>
<th>Environmental</th>
<th>Competitive-Contemporary</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA0406</td>
<td>N</td>
<td>31</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Sum</td>
<td>61.00</td>
<td>3.99</td>
<td>161.18</td>
</tr>
<tr>
<td></td>
<td>Mean (Percent)</td>
<td>1.967</td>
<td>0.142</td>
<td>2.3703</td>
</tr>
<tr>
<td>ROE0406</td>
<td>Sum</td>
<td>-11.39</td>
<td>17.92</td>
<td>15.46</td>
</tr>
<tr>
<td></td>
<td>Mean (Percent)</td>
<td>-0.3674</td>
<td>0.6400</td>
<td>0.2274</td>
</tr>
</tbody>
</table>

Source: Empirical data

Table 11 also reveals several interesting insights. Moreover, 2.3 percent of the ROE variances can be explained with the environmental school of strategic management. The variances of ROA value could be explained with only 1.8 percent with the classical school but with the significance level of p<0.10.

Figure 11 Regression analyzes of financial results and construct of strategic cognitive models

<table>
<thead>
<tr>
<th>Constructs</th>
<th>ROE</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical</td>
<td>β</td>
<td>Adjusted R²</td>
</tr>
<tr>
<td>Environmental</td>
<td>-0.045</td>
<td>-0.006</td>
</tr>
<tr>
<td>Competitive-Contemporary</td>
<td>0.176</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>0.068</td>
<td>-0.003</td>
</tr>
</tbody>
</table>

† p<0.10, *p<0.05

Source: Empirical data

Hypothesis 2 is partially supported firm performance is impacted by the leader’s preferred cognitive model. Differences in firm performance are observed across the four cognitive strategic management thoughts: Classical, Environmental and Competitive-contemporary model.

Discussion

The empirical results reflect the complexity, contradictions and multi-perspectives of strategic management in practice. The results have similarities with the analysis performed in
2004 in Primorsko-goranska Chamber (Jelenc 2005). Thus, the results confirm the research done in 2004 and generalized to firms doing business in all of the Republic of Croatia. The orientations of Classical, Environmental and Competitive-contemporary have been shown in this study to be distinctive strategic cognitive models of strategic thinking.

In addition, the most frequently used model of strategic management was shown to be the competitive-contemporary cognitive model, followed by classical model and then by environmental model of strategic management. From this information, we might conclude that the top managers in the Croatian firms predominantly think according to the premises of the Competitive-contemporary model of strategic management.

One of the possible explanations for the popularity of this combined model of thinking could be the emergence of co-opetition (Brandenburger, Nalebuff 1996) a neologism rediscover by game theorists and used to describe cooperative competition. The construct of the classical model is recognized as a separate cognitive model which calls attention to the presence of the basic ideas of strategic management within top managers cognitive model of strategic thinking. The third group is the environmental school appears to the preferred cognitive model of the top managers sensitive to the importance and strength of the environment, natural selection principles, and adaptation to the changes recognized in the competitive landscape.

In addition, this research is the first to empirically demonstrate the relationship between strategic thinking orientation and firm performance. We discovered that firms lead by managers choosing the Competitive-contemporary model of strategic thinking have positive financial results as measured by ROA. The top managers that chose competitive-contemporary model have the highest financial results when the criterion is the mean value of ROA in the period 2004-2006. When the criterion is the mean value of ROE, the most suitable way of top managers’ approach is according to the premises of the Environmental
model. When researching the relation between the models and financial results with the regression analysis, the environmental model explained 2.3 percent of variances of ROE, and classical school can explain 1.8 percent of variance of ROA. At the first glance, this percentage is small, but reflects the direct influence and importance of top managers viewpoint on the financial results of the Croatian firms. The relation is established, while the nature of this relation is still subject for further research.

Limitations

There are several limitations in both the theoretical and the empirical part of this paper. The limitations of the theoretical part lie in the assumptions. Key assumptions included the following: a) the top manager is the person in charge of the process of strategic management, b) his/her opinion about strategic issues is relevant for the firm, and c) the subjective opinion of the top manager is indicative of the firm’s approach toward the process of strategic management. Furthermore, we assumed that the way the top manager perceives the process, influences the way his employees approach the process and that this reflects on the entire firm. Each of the assumptions is open to challenge since empirical research supporting them is lacking.

The limitations of the empirical portion of the paper are several. The nature of strategic management includes three time frames: the past, the present, and the future. Top managers are influenced by the past events and experience, they resolve current problems, and make plans to prepare themselves and the firm for future challenges. We conducted the field research about top managers’ perception of the process of strategic management in 2006-2007. Their perception reflected their strategic behavior at that moment. This strategic behavior became effective in 2007-2008 and the first financial indicators will be seen in 2008 or 2009. This would be the appropriate time lag for the strategic decisions to prove their
accountability. Thus, the financial results of 2008-2009 that will be published in the first half of 2010 will be the best indicators about the most suitable ways of strategic thinking and schools of strategic management. They will additionally show how much the financial results do depend on the construct of schools of strategic management. There is a vast majority of top managers in the sample performing their duty for two years and longer (41.7 percent of top managers had been on their current position 2-5 years, 23.6 percent of top managers 6-10 years, and 16.5 percent for 11 or more years). We concluded it is rational to take into account their perception in the period of 2006-2007 and compare it with the financial results of 2004-2006. In order to avoid the statistical bias in financial results we took into consideration the average value of the three financial indicators in the period of 2004-2006.

The second limitation we faced is that there is only one respondent in each of the firms who could fill in the questionnaire. Because of this, one might conclude that the results of this field research provided biased answers. The aim of this field research was to find out about the perception of the person in charge of the process of strategic management and not the opinion of managers at lower levels or employees in general. The opinion of the top manager is the only perception that we were interested in the firm. The subjectivity was intended and deliberate. It would be illusionary to ask for an objective opinion about a subjective perception. The subjective opinion of the top manager becomes the objective criteria for middle management.

**Further research**

At the conclusion of this paper, we would like to point out several possible directions for further research. The schools of strategic management are one of the topics that will keep appearing in strategic management literature from time to time. It may not be the mainstream research track but rather the method that researchers will use in order to denote the
advancement in the field of strategic management. It will offer quite an extensive and refreshing overview of the existing paradigms and the guidelines for future research. The research of strategic management schools is like a look in the mirror of strategic management research, suggesting which topic is passé, which topic should be more emphasized and which topic has the potential to evolve.

Strategic management is oriented on goals and their financial and non-financial results. Top managers should base their behavior on the direct strategy-financial result relationship in order to receive as much dynamic feedback about interactions and continuous improvement. This will help to build and maintain the top managers’ faith in strategic management, since it will prove itself beneficial to their work.

Moreover, the future research of strategic management in Croatia should be focused on several additional issues. This research could be continued and evolved into a longitudinal research that would further depict patterns and trends, and the way these patterns and trends change through time. Due to the nature of research and the respondents included in the empirical analysis there should be at least a five-year time frame. This period is long enough for the top managers to change their perception about the process of strategic management and change the dominant type of strategic thinking. The research should be directed towards more qualitative methods in order to grasp the strategy-as-practice skill. The learning experience of top managers is a valuable asset, a tacit knowledge that should be more researched in order to acquire new notions and insights that will result in better and more efficient future managers/strategists.
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Croatian Chamber of Economy [http://www.hgk.hr]. Accessed on August 18, 2005
### Appendix  List of premises and their codes

<table>
<thead>
<tr>
<th>Codes</th>
<th>Text of the premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class49</td>
<td>Strategic orientation derives from the analysis of external factors and factors within the firm.</td>
</tr>
<tr>
<td>Class50</td>
<td>Managers working on strategic issues are specially educated for such a task.</td>
</tr>
<tr>
<td>Class51</td>
<td>Good strategy is a prerequisite of business success.</td>
</tr>
<tr>
<td>Class52</td>
<td>When we resolve problems, we select among several options in order to determine which solution is the most appropriate.</td>
</tr>
<tr>
<td>Class53</td>
<td>In our firm, we do the planning by the book, i.e. step-by-step from formulation through implementation up to control.</td>
</tr>
<tr>
<td>Class54</td>
<td>The say of the top manager or the top management team is the most dominating in the process of formulating the strategy.</td>
</tr>
<tr>
<td>Class55</td>
<td>We use SWOT analysis.</td>
</tr>
<tr>
<td>Class56</td>
<td>By forecasting, we provide some features needed for planning.</td>
</tr>
<tr>
<td>Class57</td>
<td>Planning has to be formal and explicit.</td>
</tr>
<tr>
<td>Class58</td>
<td>The plan is implemented by the strictly defined steps.</td>
</tr>
<tr>
<td>Class59</td>
<td>Once formulated the plans do not change.</td>
</tr>
<tr>
<td>Envir60</td>
<td>The firm has to pay attention to the drafts of laws and regulations.</td>
</tr>
<tr>
<td>Envir61</td>
<td>The firm can only react to changes and adjust to new market demands.</td>
</tr>
<tr>
<td>Envir62</td>
<td>The key of survival is to adapt to the environment.</td>
</tr>
<tr>
<td>Envir63</td>
<td>Some sets of norms and values in the firm are not easily changed.</td>
</tr>
<tr>
<td>Envir64</td>
<td>The firm has to follow the “rules of the game” set by others.</td>
</tr>
<tr>
<td>Envir65</td>
<td>Only the most flexible survive.</td>
</tr>
<tr>
<td>Envir66</td>
<td>Mentality and culture directly influence the firm.</td>
</tr>
<tr>
<td>Envir67</td>
<td>We are too small to change the world.</td>
</tr>
<tr>
<td>Envir68</td>
<td>The environment directly and to large extent influences our strategic direction.</td>
</tr>
<tr>
<td>Envir69</td>
<td>The firm cannot do much if the opportunities in the environment oppose its success.</td>
</tr>
<tr>
<td>Envir70</td>
<td>Firm receives the impetus to change from the environment.</td>
</tr>
<tr>
<td>Comp71</td>
<td>We try to be the first to launch the product on the market in order to gain advantage.</td>
</tr>
<tr>
<td>Comp72</td>
<td>Creativity is key factor in formulating strategy.</td>
</tr>
<tr>
<td>Comp73</td>
<td>We focus our energy on the new challenges and not the problems from the past.</td>
</tr>
<tr>
<td>Comp74</td>
<td>Strategy is the mix of intuition and wisdom.</td>
</tr>
<tr>
<td>Comp75</td>
<td>We proactively create changes on the market.</td>
</tr>
<tr>
<td>Comp77</td>
<td>The market is a battlefield where we fight our wars.</td>
</tr>
<tr>
<td>Comp78</td>
<td>The most successful managers are the source of innovations and ideas that lead to changes.</td>
</tr>
<tr>
<td>Comp79</td>
<td>Idea and work are crucial features of a successful business.</td>
</tr>
<tr>
<td>Comp80</td>
<td>It is important for top manager to be charismatic.</td>
</tr>
<tr>
<td>Comp81</td>
<td>We understand our competitors; therefore, we can forecast their reactions and behavior.</td>
</tr>
<tr>
<td>Comp82</td>
<td>Intended strategy might change if market changes.</td>
</tr>
<tr>
<td>Comp83</td>
<td>Team spirit and project approach to business create pleasant working...</td>
</tr>
</tbody>
</table>
atmosphere.

Training and specialization is very important.

A valuable part of our firm is the tacit knowledge (employees’ knowledge that is hard to formalize).

We work on building competitive advantages.

Learning makes top managers successful.

We do business only in the narrow segment in which we are the best.

Dynamics of the business is the result of the way the top manager thinks.

Dynamics of business is the result of the way the employees think.

Intellectual capital is the most important source of strategy.

Lara Jelenc, PhD working as senior assistant at the Faculty of Economics, University of Rijeka, Croatia.
Classifying Entrepreneurship within a Business Development Framework

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Abstract

The phenomenon of entrepreneurship from the time of its first observance until the present day has been striving for an identity. This paper marks out a distinctive evolutionary path of thought on entrepreneurship and uses its referent and counterpart to support a conceptual view of entrepreneurship within a business development framework. The work brings to bear a two-dimensional intersecting spectra diagram describing entrepreneurship as one of four archetypes of the business development manager.

Introduction

Entrepreneurship is being recognized more and more frequently by academics and practitioners alike as the way forward in addressing present and future economic and social challenges. However, entrepreneurial terminology is inconsistently used within the public and scientific sphere. This inconsistency portends a lack of a consensus on the meaning of entrepreneurship, one that is coherent with classical as well as contemporary scientific thought. By extension without a clear and universally accepted understanding of entrepreneurship its
framing is hopelessly fluid and hard to set down which confuses and complicates the role entrepreneurship plays within the scheme of management discipline. The dialog on entrepreneurship has availed itself not only with explanations of entrepreneurship but also with various proposed counterparts to entrepreneurship, which adds to the problem and confusion.

There is a general agreement among contemporary authors that all these confusions must be addressed for proper scientific underpinning (Berglund & Johansson, 2007: 77) and for its ease and accuracy of translation into practical applications among management professionals. That the confusion has rained this long is odd considering that the entrepreneur has been recognized as the agent driving business development from the time of Cantillon in the 18th century to the present day. However, because of its prominent place within the business development arena, substantive thought and attention has been allocated to its examination to warrant that the framing of entrepreneurship can be confidently established.

The progress of the entrepreneurial discipline, as with other disciplines, is a cumulative effort. The theoretical conceptual framework presented below is not an auto-referential framework; rather it is an integrated framework, integrating various conceptualizations of entrepreneurship. The study works under the basic assumption that order within current and past knowledge of entrepreneurship is existent. The methodology therefore grasps the relevant knowledge and organizes it in such a way to produce order from which a consensus view on entrepreneurship and its framework can be expressed and studied.

Entrepreneurship is an abstraction of an observable phenomenon. Since the phenomenon is ubiquitous, the term entrepreneurship is quite familiar. But familiarity does not preclude uncertainty, because as an abstraction it is necessarily ambiguous and ambiguity causes miscommunication which leads to misunderstandings. Entrepreneurship from the time the
phenomenon was first observed up until the present day has been striving for an identity. An identity that brings its ideas closer to the true object of the phenomenon and one that describes its distinctive nature. The conceptual scheme presented here sorts the complexity of the determinants of entrepreneurship and uses its referent and counterpart to form a framework. The identification of the dominant referent is important, because it leads to the formulation of the counterpart, which represents the compliment to entrepreneur. Together, the entrepreneur and its counterpart help to delineate the framework. With the wrong referent or with an ambiguous referent the proper framework is unattainable and effective communication is diminished.

To this end the research explores the dialog revolving around the research questions, What are the relevant concepts of the entrepreneur and its managerial counterpart?, and How can the relationships between the entrepreneur and its managerial counterpart be viewed within a theoretical framework? The research process begins with a description of selected conceptual views on entrepreneurship marking out an evolutionary path of thought towards an opportunity-based conceptualization of entrepreneurship; propositions are then made supporting the interrelationship of a new combination of concepts within and among the entrepreneurial management and administrative management constructs; the concluding section presents the entrepreneur, intrapreneur, administrator, and promoter as distinct archetypes within the business development theoretical framework and their relationships are depicted in graphic form. The result show a finer distinction than Stevenson and Jarillo’s (1990) entrepreneur who is presented as the promoter. The driving force behind this study is the recognition that entrepreneurship theory can be advanced when the three key components referent, counterpart, and framework are established. Establishing these three components is a necessary precondition for a theoretical
grounded conceptualization. It will allow for consistency in studying entrepreneurship and can be drawn upon in future research.

**Dialog on Entrepreneurship**

There has been documented dialog on how to define entrepreneurship stemming back to the 18th century when Richard Cantillon ‘argued that entrepreneurship entailed bearing risk of buying at certain prices and selling at uncertain prices’ (Roberts, Stevenson, Sahlman, Marshall & Hamermesh, 2007: 4). In the early 19th century the French economist Say broadened the definition and wrote ‘the task of the entrepreneur is to combine the factors of production (capital, knowledge, and labor) into a business firm (Say, 2001: xxxi).’ It was a step beyond what Cantillon had written on the role of the entrepreneur and it allowed Say to distinguish the entrepreneur from that of the manager.

About 100 years later the Austrian economist Schumpeter noted that ‘Say failed to realize that the phrase “combining factors” when applied to a going concern, denotes little more than routine management: and the task of combining factors becomes a distinctive one only when applied not to the current administration of a going concern but to the organization of a new one (Schumpeter, 2003: 530).’ Schumpeter held that the entrepreneur's task is “creative destruction”, that entrepreneurship disrupts market equilibrium, and the essential tool is innovation (Drucker, 1985).

Kirzner extending the work begun by Mises and Hayek of the Austrian school debated Schumpeter’s concept of entrepreneurship. For Schumpeter ‘the essence of entrepreneurship is
the ability to break away from routine, to destroy existing structures, to move the system away from the even, circular flow of equilibrium. For Kirzner, “the crucial element in entrepreneurship is the ability to see unexploited opportunities whose prior existence meant that the initial evenness of the circular flow was illusory – that, far from being a state of equilibrium, it represented a situation of disequilibrium inevitably destined to be disrupted.’ Schumpeter’s entrepreneur ‘is the disruptive, disequilibrating force that dislodges the market from the somnolence of equilibrium’; while Kirzner’s entrepreneur is ‘the equilibrating force whose activity responds to the existing tensions and provides those corrections for which the unexploited opportunities have been crying out (Kirzner, 1973: 72-73).’

Kirzner opens for philosophical debate whether profit opportunities are waiting to be grasped or upon seeing such opportunities the entrepreneur in fact creates them. The dichotomy between the entrepreneur who is alert to the discovery of hitherto overlooked exogenous created changes and the entrepreneur who is the source of disruptive changes to perceived equilibrium state or status quo is an innocuous one (Kirzner 1999, 1973). Both are seen as agents ‘responding to existing imbalances in the market (Kirzner, 2008: 9)’, and ‘opportunities are seen as both existing and created (Berglund, 2007: 243)’.

Shane and Venkataraman (2000: 220, 2001) recognize entrepreneurship as the existence, discovery, and exploitation of entrepreneurial opportunity. Entrepreneurial opportunity they define as opportunity that require the discovery of ‘new means-ends relationships that are generated by a given change’; distinguished from opportunities to enhance efficiency or optimize ‘within existing means-ends framework’. This corroborates Schumpeter’s notion of the entrepreneur breaking away from routine and alludes to a counterpart, albeit a descriptive one.
Erikson (2001: 12) espouses that the complementary effects of a three dimensional framework, the ‘capacity to recognize opportunities, to coordinate (and combine) scarce resources, and to see ventures through to fruition’, captures the very nature of entrepreneurship and provides a useful tool for analysis of entrepreneurial potential. This can be seen as a compilation of Kirzner and Say’s view.

Furthering the idea of an entrepreneurial counterpart Schumpeter, Chandler, and Stevenson recognized the entrepreneurial function as distinct from the administrative or management function. Schumpeter (1951: 253) considering the work of Ricardo, Marx, Mills, and Say concluded that although a sharp dividing line between entrepreneurial activity and what he calls ordinary administrative or management activity cannot be drawn it does not ‘prevent the distinction from being possible and useful.’ Schumpeter recognizes the distinctive element to mean acting ‘outside of the pale of routine’ the creative response as opposed to the adaptive response to given conditions. Chandler (1991) recognizes the entrepreneurial function as value-creation and administrative function as loss prevention of a firm.

Previous studies by Stevenson have identified pressures that pull a firm towards either side of a management spectrum with administration on one side and entrepreneurship on the other. Stevenson sees entrepreneurship as a behavioral phenomenon and an approach to management. He equivocates the entrepreneur to the “promoter” ‘who feels confident of his or her ability to seize opportunity regardless of the resources under current control’ and the administrator as the “trustee” ‘who emphasizes the efficient utilization of existing resources.’ He places the promoter and trustee at endpoints of a spectrum and identifies eight dimensions of business practice that influence entrepreneurial behavior and administrative behavior (Roberts et
al., 2007: 5; Stevenson & Jarillo, 1990). Brown, Davidsson, & Wiklund (2001) have operationalized Stevenson’s conceptualization and the results from their empirical test validate six out of the eight dimensions found within Stevenson’s theoretical reasoning.

Stevenson’s conceptualization of entrepreneurship ‘is coherent with classical as well as contemporary definitions of entrepreneurship’ as it echoes Kirzner’s “alertness to opportunity” and Shane and Venkataraman “discovery and exploitation of opportunity” (Brown et al., 2001: 954). Stevenson and Jarillo’s intellectual pursuit is the one for which this present study most closely evolves from. Table 1 summarizes the conceptual views on the dichotomy of management function in respect to business development activities.

**TABLE 1: Dichotomy of Management Function**

<table>
<thead>
<tr>
<th>Author (circa)</th>
<th>Counterpart to the Entrepreneur</th>
<th>Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cantillon (late 18th C.)</td>
<td>-</td>
<td>risk bearer of price arbitrage opportunities</td>
</tr>
<tr>
<td>Say (early 19th C.)</td>
<td>manager</td>
<td>combines factors of production</td>
</tr>
<tr>
<td>Schumpeter (early 20th C.)</td>
<td>adaptive response to given conditions = ordinary administrative or management activities</td>
<td>creative disruptive response = acting outside the pale of routine = innovator</td>
</tr>
<tr>
<td>Kirzner (1973)</td>
<td>-</td>
<td>alert to opportunity; equilibrating force responding to existing tensions</td>
</tr>
<tr>
<td>Shane &amp; Venkataraman (2000)</td>
<td>Enhance the efficiency or optimize within existing means-ends framework</td>
<td>discovery and exploitation of new means-ends relationships or new opportunities</td>
</tr>
<tr>
<td>Erikson</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Zahra and Dess (2001) recognize that dialog and debate in entrepreneurship as a field of research is controversial and there is a need for a ‘framework that defines its domain, its building blocks and variables of interest.’ Shane and Venkataraman (2000 & 2001) also recognize that the phenomenon of entrepreneurship lacks a unifying conceptual framework. Singh (2001) scrutinizes the past literature defining entrepreneurial opportunity and he believes to move research forward, entrepreneurship scholars should continue their debate until a clear consensus unfolds and definitional frameworks are established. McFadzean, O’Loughlin, and Shaw (2005a,b) recognize that previous models on entrepreneurship and innovation are fragmented and they have sought to develop a framework for the corporate entrepreneur and the innovative process.

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**Entrepreneurial and Administrative Management Approach to**

**Business Development**
There are a few key areas this study aims to develop in order to add value to what is already known in the field. The first, the entrepreneurship approach to management is well established as an opportunity based function. This study will show that administrative approach to management can also be considered as an opportunity based function. The second, the administrator has been identified as a counterpart to the entrepreneur. This study also propagates the administrator as the counterpart, but in the true sense of the word, that is, as a complement or as a function of management that completes the whole, going further then Stevenson and Jarillo’s (1990) trustee or Chanler’s (1991) loss preventor. The third, the administrative and entrepreneurial approach to management as Stevenson and Jarillo (1990) suggest will be refined and stated as the two approaches to business development. The fourth, their constructs will be organized along two dimensions and become the two protagonist to facilitate conceptualization. The fifth, the identification of the referent to both entrepreneurial and administrative management will reinforce the constructs and conceptual scheme. The case for all these points will be laid out through a combination of definitions, analysis and situation descriptions.

In the evolution of markets, industry competition and market dynamics play prominent roles in influencing an enterprise’s market position. For continued business growth managers are experiencing pressures on two fronts; there are pressures that push the individual manager to increase operation effectiveness by employing best practices and at the same time to innovate by responding to change. These pressures force managers into playing dual roles that can be viewed on a spectrum with administration management on one side and entrepreneurial management on the other side. The qualitative nature of these pressure forces are dependent on situation factors or conditions that favor or inhibit entrepreneurial activity (Roberts et al., 2007; Schumpeter, 1951; Shane & Venkataraman, 2001).
The analysis begins with an overview of management approaches to business development as viewed from the administrative and entrepreneurial perspective. It is assumed that both administrators and entrepreneurs, alike, try to maximize value for the company, but how they go about it is entirely different. The administrative manager focuses on the implementation of known and proven best practices in the pursuit of new opportunities, opportunities that leverage the advantages of existing resources. And the entrepreneurial manager focuses on innovation in the pursuit of new opportunities, opportunities that do not necessarily utilize existing resources.

The conceptual scheme presented in Figure 1 shows the administrative manager and entrepreneurial manager construct. In graphic form the conceptual scheme depicts the relationships among the administrative and entrepreneurial manager’s concepts and in so doing clarifies their respective approach to business development. The present section sets out to demonstrate how the concepts are interrelated and proposition specifying the connections will be supported. It should be noted that while the construct ideas (administrative management and entrepreneurial management) and the concepts themselves have been identified in past literature the concept combination is new signifying a new meaning to the construct ideas.
To facilitate the analysis, an economic measurement is sought for business development. Revenue or market share increases can be considered indicators of business development, but since they do not account for the cost of gaining such increases, profit growth proves to be a better indicator or measure of business development. If a particular action adds more to a firm’s revenue than its costs or if it takes more away from its costs than its revenue then the action has generated profits. It is fair to say that any activity that produces an increase in profits may be considered a business development activity, which is in the scope or realm of virtually every manager, regardless of discipline or level within the company. Furthermore, business development can embrace either profit growth in the existing business or profit growth in an entirely new business. The implication is that because both approaches to business development strive to advance or achieve profit growth, the pursuit of opportunity analogous to the pursuit of opportunity for profit is an overarching concept common to both entrepreneurial and administrative management approach to business development. Both approaches are proactive.
opportunity seeking forward looking perspectives. And refutes Shane and Venkateraman (2000) notion that the entrepreneur is at “the nexus of two phenomena: the presence of lucrative opportunity and the presence of enterprising individuals (De Carolis & Saparito, 2006)” and that “entrepreneurs are individuals who recognize and exploit new business opportunity by funding new ventures (Baron, 2008)”. These are necessary condition, but not sufficient in establishing entrepreneurship.

There are a number of practices that allow a company to achieve profit growth. Bringing down costs, eliminating wasted effort, and outsourcing inefficient activities to more specialized third parties directly affect profits by the reduction of costs. Employing more advanced technologies and skilled workers, along with motivating employees better and managing activities with greater insight has its advantages in increasing productivity, i.e. achieving greater output per hour of work. Entering new markets and introducing new products/services or improving existing products/services can result in an increase in market share or revenue and lead to profit growth.

While the business growth opportunities are self evident in each of these practices, to draw a distinction between the two approaches to business development an additional question must be answered. Was the practice accomplished by employing known or proven best practices or was it through innovation? The answer to this question will determine whether it was an administrative or an entrepreneurial approach to business development and will serve to clarify the first dimension seen in the construct diagram.

Innovation is the single most common theme underlying all forms of entrepreneurship suggesting a strong link between entrepreneurship and innovation (Schumpeter, 1934, Kreiser &
Davis, 2009, Woolley & Rottner, 2008, and Alrich & Ruef, 2006). Schumpeter for example argues that innovation is the cornerstone of entrepreneurial activity and innovation is the fundamental undertaking of the entrepreneurial organization (Woolley & Rottner, 2008). Making innovation the natural referent for entrepreneurship.

Counterpart signifies a fit with a complement perfectly to complete a whole. If opposite sides of a spectrum are defined everything in between these ends are comprehensible. Innovation is necessarily new and unknown and unproven, best practices are necessarily existing, known and proven. One can discover or explore the new and implement or exploit the known.

For example, employing more advanced technology could be an administrative or an entrepreneurial approach depending on whether the technology originated from outside the company environment or from within the company environment, and whether competitors already utilize the technology. If technology was purchased from an outside vendor, such as a management consultant and is already being utilized by direct competitors, then this is an administrative activity. Miller (1983) states that ‘theorist would not call a firm entrepreneurial if it changed its technology or product line simply by directly imitating competitors.’ If the technology evolved from within the company’s proprietary sources, giving the company first rights to the use and benefits, then this is an entrepreneurial activity. If this propriety technology is applicable in geographical markets around the world, it could be considered a global or absolute innovation. If the technology was carried over from another industry or another geographical market, and local competitors are not yet utilizing this technology, it could constitute a local or relative innovation and be considered entrepreneurial. Additionally, if a company formulates a new combination of existing technology, this constitutes an
entrepreneurial activity, because even though singularly the technologies are existing, known, and proven the combination itself is new and constitutes an innovation. As a side note, entrepreneurial profit gain can be factored out of total profit gains and distinguished as monopoly gain due to the fact that competitors are not reaping the same benefits from the exclusivity of activity (Schumpeter, 1951: 222).

The same line of reasoning can be utilized for the other business development practices. Is the new management technique or practice one that is copied and implemented within the company environment or does the management techniques have some original or customized aspects? The extent of originally speaks to the degree or prominence of innovation involved in that activity. The entering new markets case would provoke the following questions: Why wasn’t the company engaged in that market before? Were there barriers to entry? If so, how were these barriers overcome? Was it by employing best practices or was it through innovation? Answering these questions will reveal if it is an administrative or an entrepreneurial activity. And was the new product or service improvement accomplished by employing known and proven techniques or was it a result of an in-house discovery? All of the above can lead to increased profits or business growth.

For further clarity let us look at the administrative approach and the entrepreneurial approach as viewed on the far ends of the spectrum. Recall that, while the endpoints are defined, ‘there is a spectrum of managerial behavior that lies between these end points.’ The portion to the left of the mid-point can be defined as predominantly administrative behavior. The portion to the right of the mid-point can be defined as predominantly entrepreneurial behavior (Roberts et al., 2007: 5).
On the one hand, the manager can play only the administrative role, and focus on nothing but the implementation of known and proven best practices within existing resource constraints. In one aspect this is good. The manager searches out the ‘best available technologies, skills, management techniques, and purchased inputs – which constitutes the sum of all existing best practices at any given time. This can apply to individual activities, to group of linked activities, and to the entire activities of the company (Porter, 1996: 62).’ This contributes to the enterprise’s success today by increasing the value of the current offering and/or by reducing costs.

The full effect of this single focus is not seen however, until the next product life cycle. If the emphasis on the efficient utilization of existing resources comes at the expense of not pursuing opportunities which may not necessarily utilize existing resources it could be the start of declining profits for that business. The manager might find out that while his/her competitors were also paying attention to their administrative duties, or at least made provisions for the administrative work, they were proactive in developing innovative ideas in the pursuit of opportunities better suited for the new reality of the ever-changing market.

On the other hand, the approach to management can also be weighted too far on the entrepreneurial side, the right side of the spectrum. If this exaggerated weighting comes at the expense of not employing best practices, meaning best practices are being neglected, then there may also be adverse effects. Improving operational effectiveness by employing best practices should be treated as a given. Productivity improvements resulting from employing best practices is a determinant of profit growth. A common explanation for productivity gains, in recent years, is attributed to information technology spending. ‘Gains in labor productivity are important
because they allow firms to produce more for a given amount of labor, an advantage they then can use to lower prices, to increase market share, for increasing wages to attract higher skilled workers, or to expand investment (Rhoads, 2002).

Managers need the cost advantage that comes from running a business with greater effectiveness, or else, the manager runs the risk discovering an innovative opportunity and developing it into a growth business only to concede the position a short time later to a competitor, who initially follows the leader and then with superior operational effectiveness becomes the new leader. Because innovative products or services command premium prices, they are attractive targets and ‘irresistible amid thin profit margins and expanding global competition (Aeppel, 2004).’ Even patented products might not provide sufficient protection against followers if someone else can “design-around” it easily and make it for less.

If situational factors force a manager to maintain an extreme entrepreneurial position - which implies continuous attention on the search for and development of innovative opportunities - it will be especially necessary to make provisions for any necessary administrative work by hiring or partnering with a professional manager trained to perform this function. The entrepreneurial focused manager may be on the extreme right of the spectrum, but because of the provisions made, the enterprise is appropriately weighted or balanced.

While both management approaches aim for business development, usually for sustainable profit growth, profit growth that can be preserved, both approaches are necessary, and neither is sufficient on its own. The two approaches are complements and reinforce one another. Managers of enterprises are constantly challenged to balance the demands of business development by continually improving their performance on the operational effectiveness front
and by continually searching for new opportunities on the innovation front. To satisfy the requirements on both fronts they are faced with hard choices in regards to dividing their time and the enterprises resources. The resulting performance benefits, however, reduce the risk and ensure the future viability of the business. ‘Nothing could be as risky as optimizing resources in areas where the proper and profitable course is innovation, that is, where the opportunities for innovation already exist (Drucker, 1985).’ It is equally important to know what to change as well as what not to change; when to make a change and how the change should be manifested.

The introduction of the second dimension to business development will bring to bear another aspect of the administrator and entrepreneur. Administrative managers are predominantly resource oriented. Resource oriented managers spend their time searching for markets for the products and services already produced by their operating assets (Roberts et al., 2007), and they view business opportunities through the lens of their existing assets and capabilities. They ask themselves, Do we have the resources necessary to make this investment work? or Given what we have, what is the best we can do? (Hamel, 1995) They are interested in exploiting their existing form of business (Midgley, 2009: 62), utilizing assets and resources to build and maintain their competitive advantage (Kreiser & Davis, 2009)

Entrepreneurial managers are predominantly opportunity oriented. Entrepreneurs create products and services specifically to respond to changing market requirements and the merit of the opportunity is the more dominating factor for investment decisions. Entrepreneurs also leverage their existing assets and capabilities, but in contrast to administrators, they assess business opportunities without being biased or constrained by where they are at a given moment in time. This could mean liquidating of most if not all existing assets for the benefit of the new
business - in essence starting all over again (Roberts et al., 2007). They are interested in exploiting new forms of business (Midgley, 2009: 62).

Entrepreneurs nevertheless need resources at various stages of development. Entrepreneurs may not have the resources to begin with, but this is not acting as a constraint or is not a limiting factor in their effort to pursue new opportunities. They are confident enough in the merit of the opportunity to realize that the only limitation is their ability to find and attract the resources necessary when and if they need it. They prefer multi-staged commitment of resources with minimum commitment at each stage of the development process. They are tentative or temporarily dedicated, because they are not sure if they are right and want to see what will happen. Also they don’t need to own resources to have use of them, resulting in low fixed costs (Roberts et al., 2007).

If we accept that administration managers are resource oriented, that is, they search for markets for the products and services they already produce and they assess opportunities by whether they have the resources necessary to make the investment work, then it is fair to say that if the administrator decided to act, that is, pursue a new opportunity or create new business he/she would more likely than not to already be in possession of and have control over resources required to fulfill the investment obligation. Thus, the administrative manager would be inclined to allocate the appropriate resources already under his/her control to the investment opportunity. If likewise we accept that entrepreneurial managers are opportunity oriented, that is, the market requirements takes precedent over resource capability, then the opportunity focused manager would more likely than not be needing additional resources other than what is on-hand and currently controlled. Thus this type of manager would be naturally inclined to attract these
additional resources when needed; for the manager does not have the luxury to allocate resources for which he/she does not possess or does not control (Hamel, 1999; Jarillo, 1989).

**Conclusion**

This study organizes the existent body of knowledge that supports propositions underlying a conceptual view of entrepreneurship within a business development framework. In particular, the research explores the evolution thought pattern starting from Cantillon’s pioneering work, through Say’s, Schumpeter’s and Kirzner’s work which extended the knowledge base of the entrepreneurship discipline and to contemporary authors particularly Chandler, Erikson, Stevenson and Jarillo who are striving to anchor entrepreneurship in its appropriate place.

The paper presents an administrative manager and entrepreneurial manager construct diagram. In graphic form the conceptual scheme depicts the relationships among the administrative and entrepreneurial manager’s concepts and in so doing clarifies their respective approach to business development. The paper demonstrates that the concepts are interrelated and proposition specifying the connections are supported.

The work brings to bear a two-dimensional intersecting spectra diagram describing four archetypes of the business development manager. The two-by-two matrix defined by these two dimensions place entrepreneurship within a broad business development framework and it describes the skills the development effort of the manager or enterprise require. The usefulness of establishing a classification that distinguishes between different types of management
approaches to business development provides common terminology for discussing and assessing the degree and type of challenge the enterprise faces in the development process.

The framing of entrepreneurship offers several contributions: (I) Conceptualization integrates 3 key components to study entrepreneurship theory (1) innovativeness as a referent, (2) administrator as a counterpart, and (3) business development as a framework. All of which have been commonly utilized across previous conceptualizations but never synthesized to form an integrated solution. The conceptualization informs the policy decisions of enterprise executives or managers.

**References**


ICSB Conference Cincinnati Session

Saturday June 26 at 1:30 pm

Session Description

**Entrepreneurship and the Campus: Lessons from the Field**

This interactive session will examine how various foundations, donors, colleges and universities are infusing entrepreneurship throughout the campus. From undergraduate minors in entrepreneurship, to student-led entrepreneurship clubs, to career services programs, to IP-driven university starts ups, this session will discuss various successful approaches. Participants will discover effective cross-campus designs that can enlarge entrepreneurship legitimacy among interdisciplinary administrators and colleagues.

Presenters:

**Dr. Judith Cone,**  
Special Assistant to the Chancellor for Innovation and Entrepreneurship, University of North Carolina at Chapel Hill  
Former Vice President of the Kauffman Foundation USA

**Dr. G. Dale Meyer**  
Distinguished Professor Emeritus  
University of Colorado – Boulder  
Senior Chairman, Western Partners Worldwide Foundation
HELPING ENTREPRENEURS LINK BUSINESS & FINANCE STRATEGIES
Dileep Rao, Ph.D.

Abstract

Poor management and finance skills are among the key reasons for business failure. This paper discusses web-based worksheets to help entrepreneurs develop financial projections, estimate financing needs, and select appropriate financing by entering 14 numbers and making some simplifying assumptions. These worksheets help entrepreneurs decide the right financing structure based on their investment, and debt or equity available. Entrepreneurs can also analyze options to decide the right pricing based on sales, profits and asset needs, and the right growth rate based on cash flow. This “what if” analysis can help entrepreneurs better link their business and finance strategies, select the business strategy to fit their financial situation and goals, and develop their starting finance plan and financing structure. The key benefit of the worksheets is that entrepreneurs can understand linkages between business decisions and financial implications and needs.

Introduction

Among the biggest reasons for business failure are said to include lack of experience, insufficient capital, poor inventory management, over-investment in fixed assets, poor credit arrangement management, and unexpected growth (Ames 1983). All of these reasons fall under the categories of poor management skills and poor finance skills. Due to this lack of skills, fewer than half of new businesses survive for more than two years (Song 2010; Song, and Parry).

According to Drucker (Drucker 2001), not knowing how to manage is the single largest reason for the failure of new ventures. To manage well, entrepreneurs need to understand their markets, and develop reasonable financial projections, determine financial needs and design their financial structure based on their requirements and reasonable assumptions.

This paper shows how entrepreneurs can improve their management and finance skills by learning to link their business and finance strategies. While this is unlikely to lead to universal success due to competition, which is another reason for business failure (Berle 1989), the
expectation is that those who know how to link their business and finance strategies can make their businesses stronger and are more likely to succeed, all other things being equal.

Finance expertise includes financial management, as discussed above, and financing expertise. To finance their venture, entrepreneurs can use their own resources, obtain funds from family and friends, or seek financing from non-related parties or development finance sources in the form of debt, equity or grants. They fail if they are unable to pay their lenders when due, if they are unable to raise sufficient equity to pay for their losses or fund their growth, or they close down due to lack of cash flow or perceived potential. Equity usually has a higher financial cost, has the risk of potential loss of control, and is also tough to find. According to the Small Business Administration, there are about 600,000 new businesses started each year (SBA website). Between 2000 and 2009, venture capital institutions funded an average of 333 startups per year (PWC MoneyTree Survey). Angels financed about 55,480 ventures in 2008 with about 45 percent of these in the seed or startup stage (Sohl 2008). That amounts to about 25,000 ventures financed by angels. This means that the vast majority of new ventures (and growing ventures) have to fund their needs from the entrepreneur’s savings, cash flow, friends, or family. Or they can select debt.

But how much debt should the business obtain? Leverage can cause the venture to fail since it requires that the venture achieve sufficient sales and cash flow in time to pay debt service, and is usually based on an “optimistic view of the future” (Gilbert 1990). To determine the right levels of debt and timing for debt service, companies need to understand their potential cash flow under various possible scenarios and use realistic assumptions to determine acceptable levels of risk. Debt also allows a smaller margin of error and a higher risk for entrepreneurs. In many small businesses, the level of assets is insufficient for bank financing (Gilbert 1990). This
can mean that entrepreneurs need to pledge their personal assets such as their homes. This makes their decision to borrow very risky when compared with that of executives who do not assume any personal liability.

Entrepreneurs are less likely to fail when they know their gross margins and cash flows (Osborne 1993). But for a startup, this is an unknown and the need to gauge the relationship between the assumptions for sales, gross margins, expenses and assets, the anticipated finance needs and reasonable financial structure becomes more of an imperative.

Entrepreneurs can therefore benefit if they can link their sales and marketing strategy and expenses, prices, sales, margins, growth rate, financing needs, amount of debt and equity they should get, debt service, cash flow under various scenarios, and potential dilution under equity to gauge the option that best balances the business potential and the entrepreneur’s risk.

After the business is operational, entrepreneurs need to be able to monitor their performance against their projections regularly to see how well their companies are performing against their expectations and compare their cash flow to their debt service requirements (Neely 1998). The need to monitor does not diminish if the venture is financed with equity. Investors also have expectations of returns and exits (Gilbert 1990) and they expect the venture to be managed without hiccups. Otherwise, they may change management (if the investors have the right to do so) or not fund future rounds, which could result in the closing of the venture.

Lastly, new business development requires a variety of skills including technical, operations, sales, marketing and finance expertise, and often the entrepreneur needs to know enough about all of these to serve the customers and develop an advantage. There are few entrepreneurs who are competent in all the areas, and many entrepreneurs do not have the resources to hire experts. A study by the author (Rao 2010) shows that of the 28 entrepreneurs
who built $100 million+ (sales and/or valuation) businesses in Minnesota, the two strongest skills, after leadership, were in sales (64 percent) and financial management (64 percent). This is an unusual combination. Many entrepreneurs are not naturally skilled in financial management and often leave financial projections, financing and monitoring to others, such as their accountant. While ventures with entrepreneurial teams may have a full set of skills, individual entrepreneurs often need to learn these skills themselves. Studies have shown that individuals often refuse to engage in “close and trustful relationships with representatives of other disciplines” (Luthje 2006, and Prugl). This means that the ability to teach financial management skills to otherwise qualified entrepreneurs could be a valuable tool.

**Addressing the Need: Help Entrepreneurs Link Business and Finance**

This paper discusses a set of web-based worksheets that help entrepreneurs without finance expertise to develop a basic financial model of their business to project their financial statements, estimate the amount of financing needed, and design an appropriate financing structure based on an analysis of multiple business scenarios and assumptions. This simple “what if” analysis can help entrepreneurs to better select the business strategy that best fits their financial situation and goals. It can help entrepreneurs link their business and finance strategies, and develop their starting finance plan and financing structure.

One of the key problems in entrepreneurial education is that most entrepreneurs, especially those who come from a sales or operations background, are not very comfortable with financial statements. Accounting and financial controls often seem alien especially due to the complexity of the tax code, and they seek the assistance of accountants to develop their projections.
This can be true even of business school students. The author teaches MBA students, many of whom learn how to analyze existing financial statements, calculate trends, variances and ratios. But they are often lost if they are asked to develop a set of financial projections from scratch for a new venture. They are usually unaware of the various assumptions they have to make that affect the financial statements, and how they interrelate to each other. More importantly, they do not seem to understand the links between their business strategy and their financial needs and profitability.

This often leads to problems after they start the business. Even though entrepreneurs state, and maybe think, that their projections are conservative, the reality is that projections hardly ever come true. And even if the projections were conservative, higher sales levels than projected can require the business to need more cash to sustain the higher levels of business activity. Entrepreneurs often do not realize the implications of any changes from their projections and so are blissfully unaware of impending problems. As an example, their sales may be lower than projected and they don’t realize that their losses may be higher and cash outflow higher still and one day they realize that they don’t have the cash to meet payroll. This can lead to failure through insufficient capital.

The above is just one scenario. Many entrepreneurs are uncomfortable with numbers and think that only their accountant needs to know their numbers. This sometimes leads them to not know their true costs or the relationship between sales, pricing, assets and cash flow, and think that they can do better by selling more. Entrepreneurs need to understand how their business decisions can affect their financial results.

Entrepreneurs could also do better if they could test the impact of their business decisions on their financial results and financing needs. This would include understanding the impact of
sales levels, business strategy, and pricing on the amount of profits, cash flow, assets, and financing structure. Therefore it is important to find ways to help entrepreneurs understand the basics of financial statements, how they reflect business performance and how their financial results are linked to their business decisions. This can help the entrepreneurs make better decisions to reach their goals.

The goal of the “60 Minute Finance Plan™” is to help entrepreneurs develop their basic financial projection and to determine their needs without being overwhelmed in accounting minutiae. This means getting the first draft of the basic finance projections done with some simplifying assumptions and then adding the complexity, which has to do with debt and taxes.

How to Help Entrepreneurs understand their Numbers

How does an instructor or advisor teach entrepreneurs to understand what the numbers mean to the business? This paper suggests a step-wise approach to teach entrepreneurs to understand financial statements and to use this knowledge in their business.

A lot of the complexity of financial statements arises from depreciation and interest. Without depreciation, equipment would be just another expense and so would interest. Interest payments are more complicated because they depend on the level of debt, which can be influenced by the interest payments.

Therefore in the first cut, the “60 Minute Finance Plan” is designed to assume that there are no fixed assets to depreciate or interest costs to calculate. A ‘starter’ financial statement for a new company can be determined by using 14 numbers. Instead of fixed assets, the entrepreneur can include an equivalent amount into leasing costs so that the financial statements are accurate assuming an all-equity financed venture. Fixed assets and depreciation could be added after the
first cut of financials is developed. To use the worksheets (see www.infinancing.com), the entrepreneur enters the following numbers and clicks the “apply” buttons:

- Tax rate
- Interest rate on debt
- Year one sales
- Sales growth rate
- Cost of goods as percent of sales
- Sales and marketing costs as percent of sales
- General and administrative costs as percent of sales
- Lease payments for all fixed assets for each year
- Accounts receivable as percent of sales
- Inventory as percent of sales
- Other current assets as percent of sales
- Accounts payable as percent of sales
- Accruals as percent of sales
- Other current liabilities as percent of sales
- Initial investment assuming equity

Based on the above numbers, the worksheets at infinancing.com provide the following financial statements:

- Income statements as shows in Figure 1.
- Balance sheet as shown in Figure 2.
- Cash flow statements as shown in Figure 3.
- Finance needs by use for each year, as shown in Figure 4.
Figure 1.

Income Statement Output

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>Rate based on prior year</th>
<th>2007</th>
<th>2008</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Growth Rate 1YR (%)</th>
<th>Growth Rate 3YR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales/Revenues</td>
<td>Percentage</td>
<td>n/a</td>
<td>n/a</td>
<td>132</td>
<td>140</td>
<td>177</td>
<td>178</td>
<td>198</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>Percentage</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>859</td>
<td>715</td>
<td>707</td>
<td>696</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>Percentage</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>550</td>
<td>719</td>
<td>728</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Gross Margin (%)</td>
<td></td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
<td>n/a%</td>
</tr>
<tr>
<td>Sales &amp; Marketing Costs</td>
<td>Percentage</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>156</td>
<td>215</td>
<td>318</td>
<td>358</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>R &amp; D, Admin, &amp; Lease Rent</td>
<td>Percentage</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>110</td>
<td>145</td>
<td>157</td>
<td>177</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Earnings before Income</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>325</td>
<td>357</td>
<td>360</td>
<td>402</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Lease Payment</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>EBITDA</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>325</td>
<td>357</td>
<td>360</td>
<td>402</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Annual Depreciation</td>
<td>(Fixed Assets)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Annual Amortization</td>
<td>(Other Assets)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Operating Income</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>325</td>
<td>357</td>
<td>360</td>
<td>402</td>
<td>470 %</td>
<td>470 %</td>
</tr>
<tr>
<td>Interest</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Pre-Tax Income before extraordinary items</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>325</td>
<td>357</td>
<td>360</td>
<td>402</td>
<td>470 %</td>
<td>470 %</td>
</tr>
<tr>
<td>Gain on Fixed &amp; Other Antd. Sale</td>
<td>(Net of Liquidations)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>Other Extraordinary Income</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td>Pre-Tax Income</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>325</td>
<td>357</td>
<td>360</td>
<td>402</td>
<td>470 %</td>
<td>470 %</td>
</tr>
</tbody>
</table>

Taxe

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>Rate based on prior year</th>
<th>2007</th>
<th>2008</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Growth Rate 1YR (%)</th>
<th>Growth Rate 3YR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>132</td>
<td>140</td>
<td>177</td>
<td>178</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
</tbody>
</table>
Figure 2.

Balance Sheet Output

![Image of a balance sheet output]

The balance sheet output contains detailed financial information for different years, including assets, liabilities, and equity. The data is presented in a tabular format, with columns for different years and categories such as cash and short-term investments, accounts receivable, inventories, and more. Each category is followed by the corresponding financial figures for each year, allowing for a clear comparison and analysis over time.
Figure 3.

Cash Flow Output

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Growth Rate (Yt-Yt-3)</th>
<th>Growth Rate (Yt-Yt-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beginning Cash</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>143</td>
<td>251</td>
<td>552</td>
<td>854</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Internal Sources of Cash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net Income (Loss)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>105</td>
<td>214</td>
<td>398</td>
<td>256</td>
<td>206</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Non-Cash Expenses</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Non-Cash Sale (Loss) of Fixed Assets Sold</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Non-Cash Sale (Loss) of Other Assets Sold</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Increase in Accounts Payable</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>120</td>
<td>13</td>
<td>14</td>
<td>16</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Increase in Accounts Receivable</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>1</td>
<td>62</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Increase in Other Current Liabilities</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>01</td>
<td>0</td>
<td>12</td>
<td>11</td>
<td>12</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Internal Cash Generated (Net)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>-280</td>
<td>245</td>
<td>268</td>
<td>202</td>
<td>222</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Uses of Cash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase in Accounts Receivable</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>190</td>
<td>20</td>
<td>21</td>
<td>24</td>
<td>25</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Increase in Inventory</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>120</td>
<td>13</td>
<td>14</td>
<td>16</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Increase in Other Current Assets</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Cash from Operations</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>140</td>
<td>280</td>
<td>251</td>
<td>252</td>
<td>200</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Investing Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Purchase of Equipment</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Purchase of Real Estate</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Other Assets</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Cash from (Net) Financing Activities</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>145</td>
<td>280</td>
<td>251</td>
<td>252</td>
<td>200</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Financing Activities</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change in Debt</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Amount Raised: New Equity</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Treasury Stock Purchases</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Dividends</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Cash from (Net) Financing Activities</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>145</td>
<td>280</td>
<td>251</td>
<td>252</td>
<td>200</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
<tr>
<td></td>
<td>Ending Cash</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>140</td>
<td>281</td>
<td>252</td>
<td>254</td>
<td>1114</td>
<td>n/a %</td>
<td>n/a %</td>
</tr>
</tbody>
</table>
Figure 4.

Financing Needs Output
Benefits to Entrepreneurs

Understanding how to develop projections and the links between business strategies and financial results can help entrepreneurs improve their management of the business. The entrepreneur can use the spreadsheets to evaluate alternate financing options, and decide the right scenario for the business, including the impact of pricing and growth rate on sales, net income, cash flow and cash needs. By developing financial worksheets tied to assumptions, entrepreneurs can evaluate the “what-if” of a business. Some of the links that entrepreneurs can understand include:

Sales, assets, debt and equity: Due to the link between sales and balance sheet items, such as receivables, inventory, and payables, entrepreneurs can immediately understand the effect of increasing sales on assets needed. They can also control fixed assets by evaluating the level of fixed asset lease payments for each level of sales, giving them a perspective of the amount of total financing they need for the level of sales they expect.

Prices, sales, assets, and cash flow: Pricing can be a major decision for entrepreneurs. Many want to price low to make it easier to get sales. But lower sales, in addition to the potential of sparking a price war, may result in higher sales, assets and financing needed by the business, and lower profits and reduced cash flow for lenders and investors. These worksheets allow the entrepreneur to understand the connection between the level of pricing and sales, gross margins, cash flow and asset needs.

Market segment, costs of selling, and cash flow: Some market segments are potentially big and look attractive. But they could also require large upfront investments in marketing, even before the company benefits from any sales. Also, if the segment requires that the entrepreneur work through intermediaries, such as distributors or retailers, the net amount received could be
much lower than the suggested retail price, further reducing margins and cash flow. Understanding this connection can help entrepreneurs find the right segment.

*Growth rate, assets and cash flow:* As many entrepreneurs realize after they are in business, if they are able to increase internal cash flow, they are more likely to get external cash. Financiers like to finance businesses that are strong, which means those with high internal cash flow. And cash flow is often a function of growth rate. A higher growth rate can require more assets and more financing. Finding the right growth rate can be a crucial decision so that the venture does not run out of money.

*Fixed costs, margins and break-even levels:* Raising money becomes much easier after the business starts to show a profit. The worksheets can help entrepreneurs understand the scenario that best balances market domination and break-even levels. This understanding may encourage entrepreneurs to bootstrap and do more with less by using strategies such as outsourcing more operations, and making more costs variable.

In all ventures, especially new ones, the business and finance strategies are intertwined. Entrepreneurial strategies are limited by available financing and financing availability is usually affected by the strategy. But entrepreneurs seem to regard the development of these strategies as a sequential process. By understanding the links, entrepreneurs may understand their strategic options at various financing levels, and be in a better negotiating position with financiers. These worksheets allow entrepreneurs to experiment with alternative options to decide which scenario best captures their selected market while finding the best financing option.

**Conclusion**

While this paper only describes the initial starter financial projection and needs, entrepreneurs can also add additional complexity such as taxes and debt, with the related interest
costs. Entrepreneurs can use the IRS Publication 946 (How to depreciate properly) to calculate the level of depreciation for the anticipated amount of fixed assets, and add them to the balance sheet and income statement. Most likely, the entrepreneurs will use their accountant to calculate the precise amounts. They can also calculate the amount of debt they can borrow using the senior and subordinated debt worksheets and enter the interest costs in the financial statement. This can allow them to recalculate the financial needs of the business. The equity valuation worksheet allows the entrepreneur to understand the potential dilution they will incur at each round. The key benefit of the “60 Minute Finance Plan™” is that entrepreneurs can understand the linkages between their business decisions and the financial implications and finance needs.

Author

Dileep Rao was the V.P. of one of the largest development finance institutions in the U.S. He has financed over 450 businesses, has managed five turnarounds and consults in business and economic development. He is the Entrepreneurial Finance columnist for Forbes.com and an adjunct professor of Entrepreneurship at the Carlson School of Management. He has written nationally acclaimed business reference books including Business Financing: 25 Keys to Raising Money (NY Times MBA Series) and Handbook of Business Finance & Capital Sources (AMA, NY). Dr. Rao has a B.E. in Mechanical Engineering from Bombay University, M.S. in Industrial Engineering from the University of Minnesota, and a doctorate in business administration from the University of Minnesota.
References


Title: Critical Mass is Critical: A View Into the Changing World of Scholarly Communications

Abstract: In this changing world of scholarly research, each slice of the scholarly communication spectrum plays an important role. Creating content is no longer a concern. There is abundance, in fact an overabundance of scholarly research and other information. Scarcity is no longer the issue.

The issue is creating a model for producing, sharing, and maintaining scholarly communications through communities that are sustainable and enhance innovative research by other scientists. Online communities provide significant value to the widest array of users, including scientists and other professionals. Scholarly communities, based on an interdisciplinary approach, encourage innovative research. Sustainability and innovative research are critical to providing the broadest spectrum of scholarly communication to the greatest number of users. Providing access to epic amounts of content is not enough, the communities also need to increase the efficient use of the content and provide user focused tools that allow the scientists to be the most efficient and effective in their research activities.

Using data from the Social Science Research Network's (SSRN) Entrepreneurship Research & Policy Network and other sources, this presentation will provide a brief history of how scholarly communications have changed in recent years and outline an approach for using online communities to produce innovative results.

Speaker: Gregg Gordon, SSRN CEO & President
Women in Small Business — A Study of Pavalla Vaddi in Hyderabad

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Abstract

Across centuries and across time, the role of women remains rooted into eternity. It forever remains the same and at the same time goes through many transitions. It takes centuries for women’s role to unfold in different forms, shapes and sizes and to move in new directions (Indira Parikh and Bharthi, 2005). Once upon a time the large part of the world was designed such that men could only set up enterprises. Then there were women who by compulsion of circumstances took up income generating activities to sustain themselves and their family. The men of these women were either not there or if they were there would not or could not take the responsibilities of sustaining the family (Indira Parikh & Bharthi Kollan, 2005). Small business and entrepreneurship in India are the prime-force in generating productive employment and ensuring a more equitable distribution of income in the process of economic development of the country. It facilitated effective mobilization of resources of capital and skills which helps to reduce poverty and unemployment.

Andhra Pradesh a Southern state in India has witnessed a proactive policy to improve the social and economic benefits to the poor women. The government of Andhra Pradesh has provided a variety of services for empowering women’s through different programmes. The IKP Scheme was started during the year 2004-05 with an objective of providing interest subsidy on the loans taken by the Self Help Groups. In the year 2005, the scope of the 2 projects was expanded to cover all mandals and all villages of the state and the comprehensive programme was named as “Indira Kranthi Patham (IKP)”. The scheme is applicable to all loans extended by banks on or after 1st July 2004, under SHG Bank Linkage Programme (2007, APMAS).
Under this Indira Kranthi Patham one such program is Pavalla Vaddi, where the objective of this scheme is to encourage income-earning activities among the poor women by obtaining from Micro Finance through bank linkage to reduce the financial burden. The present study is to identify the beneficiaries of this scheme, and the successful women in the Self Help Groups, analyse the process and list out the problems in implementation and examine the impact of this program on women.

**Introduction**

"It is my dream. It is my firm determination, to make one crore Self-Help Group women of the State lakhiers (Lakshadhikaris”) through bank loans with the "Pavala Vaddi” scheme in the next four years. I am sure we can achieve it.

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SHGs - A MOVEMENT IN ANDHRA PRADESH

There are about 4.65 lakhs women SHGs in Andhra Pradesh covering nearly 61.70 lakhs poor women (APMAS, 2007). Andhra Pradesh alone has about half of SHGs organized in the Country. The SHGs are also popularly called DWCRA Groups, and this name became popular after the DWCRA programme (Development of Women and Children in Rural Areas) through which women’s groups were assisted initially. The SHGs are not only resorting to thrift but also are taking small loans out of the corpus available with the group. The group corpus consists of savings, government assistance and also bank loan. Members use the loan out of group corpus for their personal needs initially, however in the long run such loans are utilised for income generation activities. Since inception an amount of Rs.1556.90 crores is mobilized as corpus by these groups (APMAS, 2007).

MICRO CREDIT TO SHGs:

Micro credit summit conducted in 1997 in Washington resolved to reach 100 million poor women by 2005 all over the world. In Andhra Pradesh alone, 61.70 lakh women were covered under micro credit with a saving of a rupee per day and the financial institutions extending loans up to 4 times to the amount of group savings. From the year 1997 to January 2003, Banks extended a loan of Rs.1345 crores to SHG and the recovery of loans is more than 95%. Recently commercial banks have reduced interest rate on the loans extended to SHGs from 12% to 9% (APMAS, 2007).

PAVALA VADDI

Pavala vaddi meaning a 25 paisa interest is one of the most innovative and effective incentive scheme introduced in the sector in the country. Interest subsidy scheme was started during the year 2004-05 with an objective of providing interest subsidy on the loans taken by the Self Help Groups. The scheme is applicable to all loans extended by banks on or after 1st July 2004, under SHG Bank Linkage Programme. The incentive will be in the form of reimbursement of interest whatever is above 3% interest irrespective of bank interest rates. The subsidy shall not include penal interest, liquidated damages etc., paid to the bank. An amount of Rs. 1000.00 lakhs is allocated in the budget and the amount has been released during the current year. During the year 2005-06, an amount of Rs. 8900.00 lakhs is being year marked towards interest subsidy on the loans taken by SHGs under SHG Linkage programme.
The groups should repay the loans as per the schedule negotiated with the banks. In case any group is in default of interest/ principal for more than three months, it becomes ineligible under the scheme. To avail this subsidy, groups simple will have to regularly repay loan installments including interest to the bank. They are not required to obtain and submit any applications or certificates. Government will make arrangements to remit the subsidy amount directly in the savings bank account of all eligible groups or reimbursed the subsidy amount to groups through cheques.

Banks need just to furnish the list of all eligible groups and the amount details to the DRDA/ IKP personal. Though total financial outlays are limited under Pavala Vaddi, the scheme proved to be most effective in getting prompt repayment from the groups. It appears that the bankers also realized the potential of the scheme in getting prompt repayment and they started lending to SHGs liberally. All state governments and the central government are advised to implement similar scheme in place of their existing incentive schemes for SHGs/ poor. It may be worth noting, that the AP government appears to be replaced the erstwhile revolving fund scheme with this PV scheme (FAPPCI, 2003).

**The present study**

After the state election in 2004, a paradigm shift took place in the state development policies/ programs. Investments have been increased in rural and agriculture development. Incentives/ subsidies have been provided to the poor and vulnerable sections. State administration is made to be more accountable to the people. The SHG bank linkage got big boost in recent years. Therefore, it was felt that it would be very useful to assess the impact of the paradigm shift, which took place in 2004 on the process of women’s empowerment in general and SHG members’ in particular.

**Objectives of the study**

1. To understand the status and process of women empowerment in the district
2. To identify the beneficiaries of this scheme
3. To analyse the successful business women in the SHGs
4. To analyse and compare the standard of living of these women from the past years
THE METHODOLOGY
The study was based on both secondary and primary sources of data. Primary data was collected from 50 women doing small businesses with the help of Pavala Vaddi, in the Hyderabad region with a structured questionnaire. Data – both factual and opinion – was collected from these women relating to their group, social and economic condition, the processes etc. data collected was content analyzed and presented in the form of graph and simple statistical treatment. Secondary data was collected from books, journals, websites and other literature available.

THE FINDINGS OF THE STUDY
Over 56% of the women fall under the age of 26-35, 38% are in the age of 36-45 and only 6% of them in 18-25 years of age (Graph 1). It may be interesting to explore the reasons for higher representation of women in the age of 26-35 years. The religions of these women are 44% of each are Hindus and Muslims and only 12% are Christians (Graph 2). Majority 86% of them are married, 8% are widows, 4% are separated and 2% are single (Graph 3). The education of these women are 30% are illiterate, it indicates that the governments contribution in imparting literacy skills among its members. 22% & 18 are LP & UP, 14% are from High School, and 16% are +2 (Graph 1). The larger proportion of high school educated members, primary educated members in the sample suggests higher economic and cultural inequalities among the members.

Out of the sample, over 34% are Nuclear, and 60% belong to joint families living together and 6% are single member families (Graph 5). Majority of the members are expected to be wife status in the family. In total 60% members are wives, 32% are mothers, and 8% are mother in laws and daughter-in-laws and daughters (Graph 6). In total 88% are male headed and only 12% are female headed families including a single members families (Graph 7).

The economic conditions of the respondent from the sample 28% are salaried, 48% are self employed, petty business, 24% are house wives (Graph 8). . The monthly average income of the family before joining the group (app.): 8% are in 1001-1500 Rs,
50% come under 1501-2000, 38% in 2001 – 3000, 4% in 3001-4000 Rs (Graph 9). This show the conditions of these families are below poverty line.

The motivation to become a member of the SHG 24 % financial benefit, 28% image, 48% to earn (Graph 10). The motivations for joining into such group are: 52% through government, 22% by the support of the friends, 14% from neighbours and 12 % from SHGs (Graph 11). This shows how the governments’ active participation in motivating the women. There are no dropouts in the SHGs.100% the registers, account books, reports are maintained properly (Graph 12). The degree of change in decision making in the family after becoming the member in the group and starting the business are mobility –increased by 34% and very much increased 66% (Graph 13), education of children – increased 60% and very much increased 40% (Graph 14), investment/loans- no change 12%, increased 62%, very much increased 26% (Graph 15), healthcare – no change 2%, increased 62%, and very much increased 36% (Graph 16).

Men helping women in household work: cooking – no change 24%, increased 66% and very much increased 10% (Graph 17), brining water/fuel – 50% increased and 50% very much increased (Graph 18), cleaning 58% increased and 42% very much increased (Graph 19), going to market 52 % increased and 48% very much increased (Graph 20). Allowing women to go out for work- no change 6% increased 38%, very much increased 56% (Graph 21). This is good improvement in empowering women. Recognizing the value of the women’s household work: no change 2% increased 68% and very much increased 30% (Graph 22).

Over 100% don’t have a Saving Bank Account before joining the group (Graph 23). The source of finance that these women bear before joining the group money lenders 54%, wait for the salaries 26% and relatives and friends 20% (Graph 24). 100% of the women took loan after the joining the group (Graph 25). Over 24% of the women are still taking loan from the money lenders and 76% no (Graph 26).

Activity of the enterprise represented by women were 14 % food, 20% clothing, any other 18%, small Kirana stores 32% and saris and tailoring 16% (Graph 27). The women who underwent training were yes 32% no 40% and NA 28% (Graph 28). The total cost of the project 1000 -8000 were 22%, 8000-15000 were 6%, 1500-25000
were 32%, and from 25000-35000 it was 40% (Graph 29). The average monthly profit of these women after taking loan was 2000-3000- 14%, 3000-4000- 36%, 4000-5000- 34%, 5000-6000-16% (Graph 30). This shows that they are benefited by their businesses.

**Conclusion**

This study of women running small business with the help of *pavala vaddi* in Hyderabad was designed to determine the successful women and the major benefits they had gotten from being in the business. The members have attained more empowerment during the last years. The government in the year 2004 introduced the scheme by giving loans with less interest and easy repayments. Most of women have started the business by themselves, had small kirana shops, and the standard of living of these families have changed and the degree of change in decision making in family after becoming the member in the group has increased. Men started helping women in household work i.e. cooking, cleaning, etc, and allowing women to go out for work. The quality of groups has increased because of rigorous efforts of the project. Member’s access to health care is an area of concern, education to the members and the children and bringing the awareness about the current issues should be taken more care. The amount of the loan should be increased so that they can increase the size of the business. The observed change in women in small business empowerment might have be the result of some swift changes in economic and other fields.

The government should promote such activities to the welfare of the women in backward areas and it should continue such programs where women are uplifted. Encourage involvement of women entrepreneurs from non-Governmental organizations, voluntary agencies and such bodies involved in promotion and development, by providing them support, assistance and making use of their expertise for development of entrepreneurship.
Supporting media campaigns, workshops, trade fairs, exhibitions and other promotional events— involving governments, employers’ and workers’ organizations and local communities—to provide women entrepreneurs with a platform to promote voices for change and be inspirational for other women. Promoting policies that assist women in establishing small- and micro-businesses, including providing business skills training, access to communication technology and credits to enhance the productivity.

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1. APMAS, Women empowerment through SHGs- a study of Nizamabad district, Andhra Pradesh, August 2007
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3. Marital Status

4. Educational Qualification
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7. Is the family woman headed?
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9. Average monthly income of the family (app.) before joining the shg

10. What motivated you to become a member of the SHG?
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12. Are the attendance registers, account books, reports are maintained properly?

13. Mobility

14. Education of Children
15. Investment / Loans

16. Healthcare

17. Cooking

18. Brining water fuel
19. Cleaning

20. Going to market

21. Allowing women to go out for work

22. Recognizing the value of your household work
23. Did you have a Saving bank account before joining the SHG

24. What was the source of finance in your contingency before joining the SHG

25. Do you take loan from this source after joining the SHG?

26. Are you still availing loans from money lenders even after joining SHG?
27. Activity of the enterprise

28. Have you got any training?

29. The total project cost in the project
30. Average monthly profit
Abstract

Across centuries and across time, the role of women remains rooted into eternity. It forever remains the same and at the same time goes through many transitions. It takes centuries for women’s role to unfold in different forms, shapes and sizes and to move in new directions (Indira Parikh and Bharthi, 2005). Once upon a time the large part of the world was designed such that men could only set up enterprises. Then there were women who by compulsion of circumstances took up income generating activities to sustain themselves and their family. The men of these women were either not there or if they were there would not or could not take the responsibilities of sustaining the family (Indira Parikh & Bharthi Kollan, 2005). Small business and entrepreneurship in India are the prime force in generating productive employment and ensuring a more equitable distribution of income in the process of economic development of the country. It facilitated effective mobilization of resources of capital and skills which helps to reduce poverty and unemployment.

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1. To understand the status and process of women empowerment in the district
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**Conclusion**

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Supporting media campaigns, workshops, trade fairs, exhibitions and other promotional events—involving governments, employers’ and workers’ organizations and local communities—to provide women entrepreneurs with a platform to promote voices for change and be inspirational for other women. Promoting policies that assist women in establishing small- and micro-businesses, including providing business skills training, access to communication technology and credits to enhance the productivity.
References
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1. Age

![Age Pie Chart]

- 18-25
- 26-35
- 36-45

2. Religion

![Religion Pie Chart]

- hindu
- muslim
- christain
3. Marital Status

4. Educational Qualification

5. Type of Family
6. Status in the Family

7. Is the family woman headed?

8. Main Occupation
9. Average monthly income of the family (app.) before joining the shg

![Pie chart showing income distribution]

- 0-1500
- 1501-3000
- 3001-4500
- 4501-more

10. What motivated you to become a member of the SHG?

![Pie chart showing reasons]

- financial benefits
- image
- to earn

11. Who motivated you to become the member of SHG?

![Pie chart showing motivators]

- neighbours
- friends
- shg members
- government

12. Are the attendance registers, account books, reports are maintained properly?

![Bar chart showing maintenance status]

- yes
- no
13. Mobility

14. Education of Children

15. Investment / Loans
20. Going to market

21. Allowing women to go out for work

22. Recognizing the value of your household work

23. Did you have a Saving bank account before joining the SHG
24. What was the source of finance in your contingency before joining the SHG?

- money lenders with high interest rate
- wait till salary
- lending relatives or friends

25. Do you take loan from this source after joining the SHG?

- yes
- no

26. Are you still availing loans from money lenders even after joining SHG?

- yes
- no
27. Activity of the enterprise

28. Have you got any training?

29. The total project cost in the project

30. Average monthly profit
THE GLOBAL ENTREPRENEURSHIP MONITOR (GEM)

The Global Entrepreneurship Monitor (GEM) is the most comprehensive ongoing study of entrepreneurship in the world. GEM’s 50+ national teams conduct annual research measuring entrepreneurial attitudes, activity, and aspirations with the goal to help governments, businesses, and educators design policies, develop programs, and aid entrepreneurs in generating new jobs and wealth.

This session will focus on the exciting details surrounding GEM research, current impacts, and how you can be a part this major research undertaking at a time when individual entrepreneurial activity may hold the key to transforming the global economy.